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**“The Zoning Strait-Jacket: Evidence from the Silicon Valley,
Greater New Haven, and Greater Austin”**

by

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Note: It is expected that you will have reviewed the speaker’s paper before the seminar. Because this paper is longer than usual for the Law and Economics Seminar, the author has provided guidance on the second page of the attached document about what to focus on.

THE ZONING STRAIT-JACKET: EVIDENCE FROM
THE SILICON VALLEY, GREATER NEW HAVEN, AND GREATER AUSTIN

Robert C. Ellickson*

Abstract

Municipal zoning, shockingly, may be the most consequential regulatory program in the United States. Homeowners in an established single-family neighborhood typically have the political power to freeze it as it is, thereby clogging the functioning of real estate markets. This article reports findings from a study of the provisions of zoning ordinances and zoning maps, materials that legal scholars have seldom appraised. The municipalities chosen for study lie in three metropolitan areas, the ones listed in the article's title. Of the three, zoning in Greater Austin, one of the fastest growing metropolitan areas in the United States, is—to no one's surprise—the most conducive to housing development. Austin suburbs have less large-lot zoning, more small-lot zoning, and fewer restrictions on the construction of multifamily housing. Housing prices in the Silicon Valley, currently by far the highest in the United States, were only slightly above the national average in 1970. The extreme escalation of Silicon Valley housing prices has stemmed in significant part from its suburbs' multifaceted efforts, after 1970, to limit further densification. Many towns in Greater New Haven, by contrast, adopted exclusionary policies as early as the 1930s. These towns' enactments have distorted the region's urban form and reduced its agglomeration efficiencies, but had little effect on housing prices. Among the many subtopics the article broaches are racial segregation, the law of municipal incorporation, and the provision of open space. The article concludes with a normative section that identifies the social costs of exclusionary policies, and suggests what might be done about them.

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Note to Workshop Participants

This is an early draft. During the autumn of 2018, I will present it at law school workshops at, among others, Stanford, Yale, and the University of Texas at Austin. I plan to conduct additional field research during my visits to these universities. New findings likely will prompt significant revisions in the current draft.

Because the full draft is overly lengthy for a workshop presentation, I have deleted some sections and footnotes. The sections omitted or truncated are marked with an asterisk in the table of contents. All of the Appendixes also have been deleted. Readers with limited time might concentrate on pp. 4–24 and pp. 67–78.

TABLE OF CONTENTS

I. MEASURING A ZONING ORDINANCE’S EXCLUSIONARY EFFECTS ... - 10 -
A. A Primer on Lot-Sizes and Neighborhood Grain - 13 -
B. Metric One: The Incidence of Large-Lot Zoning - 16 -
C. Metric Two: Allowing Detached Houses on Small Lots - 18 -
D. Metric Three: Permitting Multi-Family Housing as of Right..... - 20 -
E. How Do Suburbs Zone Large Undeveloped Tracts of Land? - 22 -

II. THE SILICON VALLEY: SLAMMING THE DOOR ON GROWTH..... - 24 -
A. An Introduction to the Silicon Valley..... - 26 -
B. Zoning in the Foothills..... - 27 -
C. Zoning in the Plains - 32 -
 1. Zoning for Multifamily Housing - 33 -
 2. The Zoning Strait-Jacket in Neighborhoods of Detached Houses..... - 35 -
D. Zoning in the Bayshore..... - 41 -

III. ZONING IN GREATER NEW HAVEN: LAND OF LARGE LOTS - 43 -
A. An Introduction to Greater New Haven..... - 44 -
B. Zoning in New Haven’s Five Most Exclusionary Suburbs..... - 47 -
 1. The Effect of Water Supply on Zoning Policy - 48 -
 2. The Connecticut Statute Favoring Projects that Include Affordable Dwelling Units* . - 51 -
 3. Open Space Set-Asides..... - 52 -
C. Zoning in New Haven’s Middle-Income Suburbs: Branford Turns Green..... - 56 -
D. Zoning in New Haven’s Blue-Collar Suburbs - 58 -

IV. NORTHWEST AUSTIN’S BOOMING MUNICIPALITIES..... - 59 -
A. Introduction to the Austin Area - 60 -
B. The Pro-Growth Zoning Policies of the City of Austin and Its Suburbs - 61 -
C. The Influence of Texas Local Government Law - 62 -
D. How Extreme Are Texas’s Policies? - 66 -

V. CAUSES OF DIFFERENCES IN POLICY - 67 -
A. The Growth Machine: Economic Winners When Policy Is Pro-Development - 67 -
B. In an Older Metro, Path Dependence May Be More Profound - 69 -
C. The Role of Political Ideology..... - 69 -

VI. SUBURBANITES’ DESIRED OUTCOMES FOR EXCLUSIONARY - 70 -
ZONING THAT THE LEGAL SYSTEM SHOULD NOT CREDIT - 70 -
A. Racial Discrimination - 71 -
B. Discrimination by Social Class* - 77 -
C. Fiscal Benefits* - 77 -
D. Cartelization of Housing Supply* - 77 -

VII. THE BENEFITS AND COSTS OF EXCLUSIONARY ZONING* - 77 -
VIII. STRATEGIES FOR CURBING EXCLUSIONARY ZONING* - 77 -

IX. CONCLUSION: THE ZONING STRAIT-JACKET - 77 -

Joseph Eichler, a housing developer, did as much as anyone to make life in California affordable. In the 1950s, Eichler was the pre-eminent builder of tract houses in what was then called the Mid-Peninsula, the region a few dozen miles south of San Francisco. During that decade, the City of Palo Alto, a suburb at the epicenter of the region, approved a dozen Eichler subdivisions in its southern section. Eichler erected houses that were Modernist in design, yet modest in both size and lot area.¹ He sold these houses for around \$9,000 (\$90,000 in 2018 dollars), roughly 20% above the median national house value at the time. Apple's Steve Jobs would grow up in an Eichler in Sunnyvale, two suburbs further south. Despite the draw of the Mid-Peninsula's mild Mediterranean climate, as late as 1970, house prices in the area continued to exceed national prices by only 20%.²

As the 1970s progressed, the region increasingly came to be known as the Silicon Valley, and evolved into a magnet for national and international talent in the field of information technology. This surge in demand did not, however, generate major increases in population. During the 1950s and 1960s, the population of the Silicon Valley had tripled, a rate of growth faster than California's, whose population had merely doubled. Between 1970 and 2010, by contrast, the Silicon Valley grew at less than half the rate that California did, and also substantially lagged the United States as a whole.³ The itch to live in the Silicon Valley instead produced astronomic housing prices, by far the highest in the nation. In 2018, the sale price of an Eichler tract house in south Palo Alto had climbed to about \$2 million, about eight times the median house value nationwide.⁴

¹ In the Eichler subdivisions in south Palo Alto, house areas, excluding the open carport, seldom exceeded 1800 square feet, and lot sizes mostly ranged from 6,000 to 8,000 square feet.

² Robert C. Ellickson, *The Effect on Growth Controls on Housing Prices on the San Francisco Peninsula*, 1982 STAN. ENVTL L. ANN. 3, 6-8.

³ Between 1970 and 2010, the populations of the fifteen cities that comprise the Silicon Valley increased by 39%. California-wide, the increase was 87%, and national-wide, 52%.

⁴ See prices advertised at <https://www.eichlerforsale.com/palo-alto-eichlers.php>. According to Zillow, in July 2018 Palo Alto's median house price was \$3.3 million, fifteen times the national figure, \$218,000. See <https://www.zillow.com/home-values/>.

This Article seeks to advance understanding of these events. Municipal zoning practices, a topic of underappreciated importance, are its central focus. Scholars and members of the media usually focus on questions of national policy, the issues with greatest mass appeal.⁵ This bias neglects, however, what is arguably the most consequential regulatory program in the United States. In the 1910s, Los Angeles and New York City were the first U.S. cities to adopt zoning, an import pioneered in Frankfurt, Germany.⁶ A city's zoning ordinance divides its territory into a number of mapped districts, and varies, from zone to zone, regulations on the use of land. By the late 2010s, perhaps twenty thousand local governments in the United States had adopted zoning ordinances and complementary tools of land use control.⁷

It is hardly news that many localities' zoning policies, especially in the Northeast and California, have been exclusionary.⁸ As this Article fully documents, a zoning ordinance commonly imposes stiff minimum-area requirements for house-lots and draconian constraints on the siting of apartment buildings. These measures can suppress housing production and jack up housing prices. The Silicon Valley's sky-high prices are due to not only the area's challenging terrain and the intensity of demand to live there, but also its suburbs' restrictions on development.

The Article depicts the zoning policies of a total of 37 suburbs and 4 other localities that comprise the suburban regions of three specific metropolitan areas.⁹ One

⁵ DANIEL J. HOPKINS, *THE INCREASINGLY UNITED STATES: HOW AND WHY POLITICAL BEHAVIOR NATIONALIZED* (2018).

⁶ SONIA HIRT, *ZONED IN THE USA* 135-36 (2014).

⁷ This is an estimate. In 2012, the Census Bureau counted 35,879 general-purpose local governments in the United States.

⁸ The literature on this issue is so massive that no one can master all of it. Among the important recent contributions are Vicki Been et al., *Urban Land-Use Regulation: Are Homevoters Overtaking the Growth Machine?* 11 J. EMPIRICAL LEGAL STUD. 227 (2014); John Mangin, *The New Exclusionary Zoning*, 25 STAN. L. & POL'Y REV. 91 (2014), and David Schleicher, *Stuck! The Law and Economics of Residential Stagnation*, 127 YALE L.J. 78 (2017).

⁹ The localities studied included 37 suburban municipalities in their entirety. Of these, 15 were in the Silicon Valley, 14 in Greater New Haven, and 8 in Greater Austin. The Silicon Valley data, in most instances, also include North San Jose and West San Jose (two neighborhoods in the City of San Jose), and various unincorporated portions of both San Mateo and Santa Clara Counties. The unincorporated areas included were either large in area, such as the Stanford University lands, or populous enough to qualify as a Census Designated Place. The Greater

region is the Silicon Valley, the home of the central offices of Apple, Facebook, Google, and countless other high-tech companies. The second, and sole Frostbelt representative, is Greater New Haven, Connecticut. The final member of the trio is metropolitan Austin, Texas, or more precisely the northwestern portion of that metro.

Each of these three metros is the home of a major research university, a feature that enhances their familiarity to scholars. During the 2010s, the New Haven area, for the first time in its recent history, began to lose population, a sign of tepid housing demand. Austin sits at the opposite pole. Since 2000, the percentage increase in the population living near Texas's capital city has been as great as that of any metropolitan area in the United States. The zoning policies of localities in these three regions have significantly influenced these varied outcomes. This Article demonstrates that the land use policies of Austin and its suburbs, as most would anticipate, are far more growth-conducive than those of their counterparts in the Silicon Valley and Greater New Haven. And it provides metrics that quantify these differences.

Zoning controls can have benefits as well as costs, and unquestionably are popular with homeowners in established single-family neighborhoods. In their eyes, zoning controls promise to raise home values, prevent the invasion of obnoxious uses, and otherwise bring peace of mind in an uncertain and rapidly changing world.¹⁰ But the costs of exclusionary zoning commonly far exceed those benefits. People flock to urban locations to garner the benefits of what urban economists unartfully call “agglomeration efficiencies,” the advantages of living near others. High-tech migrants to the Silicon Valley, for example, rightly anticipate gains from being located in a more specialized labor market and having the ability to rub elbows with others like themselves.¹¹ Exclusionary zoning practices, such as large lot requirements, tend to decrease urban

Austin data typically include the northwestern sector of the City of Austin.

¹⁰ See, e.g., Edward L. Glaeser et al., *Why Is Manhattan So Expensive? Regulation and the Rise in Housing Prices*, 48 J.L. & ECON. 331, 361-66 (2005) (describing potential benefits of land use regulations, such as preserving views, limiting congestion, and preventing fiscal free-riding).

¹¹ The agglomeration efficiencies that cities provide also include greater specialization of capital, and reductions in transportation costs. See David Schleicher, *The City as a Law and Economic Subject*, 2010 U. ILL. L. REV. 1507.

densities and thus to sap the agglomeration efficiencies that an urban area can offer.

Beginning around 2015, several teams of economists, employing vastly different methodologies, have posted much-heralded papers estimating the magnitude of exclusionary zoning's national burden.¹² Each team agrees that these costs are monumental. Herkenhoff et al. claim that U.S. labor productivity would be 12.4% higher if U.S. states were to move halfway toward Texas's current level of land use regulation.¹³ Hsieh and Moretti assert that land use regulations have reduced growth of the U.S. GDP since the 1960s by 3.7%.¹⁴ Ganong and Shoag conclude that restrictive land use controls have halted the migration of low-skill households from relatively poor states to relatively wealthy states, thus misallocating the national labor force and increasing inequality.¹⁵

Zoning practices commonly are defended on environmental grounds, but their net environmental effects may be negative.¹⁶ Each year between 1955 and 1960, about 15,000 more people migrated from Texas to California than *vice versa*. By 2006–2015, the net flow between the two states had reversed, to an annual flow of 25,000 in Texas's favor. Policies that shift population from temperate regions of California to sweltering Texas increase the nation's carbon footprint.¹⁷ Large-lot zoning also tends to increase automobile dependence and waste land through sprawl.¹⁸ For many commentators,

¹² See also Matthew A. Turner et al., *Land Use Regulation and Welfare*, 82 *ECONOMETRICA* 1341, 1341 (2014) (finding “large negative effects of regulation”). Schleicher, *Stuck!*, *supra* note 8, at 102-03, provides a summary of the various studies.

¹³ Kyle F. Herkenhoff et al., *Tarnishing the Golden and Empire States: Land-Use Restrictions and the U.S. Economic Slowdown*, NBER Working Paper No. 23790 (Sept. 2017).

¹⁴ Chang-Tai Hsieh & Enrico Moretti, *Housing Constraints and Spatial Misallocation*, (forthcoming *AM. ECON. J.: MACROECONOMICS*).

¹⁵ Peter Ganong & Daniel Shoag, *Why Has Regional Income Convergence in the U.S. Declined?* 102 *J. URB. ECON.* 76 (2017).

¹⁶ See Paul Boudreaux, *Lotting Large: The Phenomenon of Minimum Lot Size Laws*, 68 *ME. L. REV.* 1, 12-18 (2016).

¹⁷ Edward Glaeser & Matthew Kahn, *The Greenness of Cities: Carbon Dioxide Emissions and Urban Development*, 67 *J. URB. ECON.* 404 (May 2010).

¹⁸ Joel Kotkin and Wendell Cox, two of the most enthusiastic defenders of U.S. patterns of suburban growth, plausibly interpret much of it as a response to demand for single-family living. These authors too often fail to observe, however, that what homebuilders can supply in the suburbs is highly regulated. *But cf.* WENDELL COX, *WAR ON THE DREAM: HOW ANTI-SPRAWL POLICY THREATENS THE QUALITY OF LIFE* 128-139 (2006) (recognizing existence of exclusionary zoning).

however, the greatest cost of exclusionary zoning is its aggravation of class segregation. Economist Raj Chetty has found that children under the age of thirteen benefit significantly from growing up in a non-poor neighborhood.¹⁹ Exclusionary zoning, although hardly the exclusive cause of residential segregation by social class, certainly aggravates it. A nation that prizes equality of opportunity might give high priority to zoning reform.

This study makes several contributions to the legal literature on exclusionary zoning. It draws on, and thereby helps publicize, the many on-line sources of seldom tapped legal materials that promise to greatly ease the study of zoning practices. Scholars have bemoaned the lack of metrics to quantify the stringency of zoning restrictions. The Article proposes three basic metrics and applies them to the three metros. For example, New Haven's suburbs are found to require house-lots of an acre or more on 67% of their residentially zoned land. Because the proposed metrics are readily replicable in other contexts, their application could contribute to greater understanding of zoning controls.

The heart of the article presents detailed profiles of the zoning policies of the localities in the three selected metros, starting with the Silicon Valley, and ending with Austin. The histories of zoning in the three vary. To simplify, some Greater New Haven suburbs were exclusionary as early as the 1930s, partly on account of Connecticut's structure of local government. Silicon Valley suburbs generally were less exclusionary until around 1970, when they turned distinctly anti-growth. Many local governments in Greater Austin, by contrast, have long been persistently pro-growth, and continue to be. The Article unpeels the onion of exclusionary zoning, introducing, in due course, issues such as water supply, the structure of local government law, and population change by race. The final substantive section briefly explores avenues for legal reform.

The histories of zoning policies in the three regions and elsewhere support this Article's central empirical claim: *the local politics of zoning works to freeze existing land uses, particularly in an already developed single-family neighborhood.*²⁰ David

¹⁹ Raj Chetty et al., *The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Experiment*, 106 AM. ECON. REV. 855 (2016).

²⁰ Evidence to support this thesis is marshaled *infra* text accompanying notes 81-94.

Westenhaver, the district court judge who tried the famous *Euclid* case that eventually went to the U.S. Supreme Court, held that Euclid’s ordinance violated the Due Process Clause. Judge Westenhaver said in part, “The plain truth is that the true object of the ordinance in question is to place all the property in an undeveloped area of 16 square miles [that is, all of Euclid] in a strait-jacket.”²¹ The judge wrongly forecast the effects of zoning. In an *undeveloped* neighborhood, Not-In-My-Backyard (NIMBY) forces are relatively weak. But in a *developed* residential neighborhood—a majority of American suburbia—*strait-jacket* perfectly describes the effects of municipal zoning.²²

This zoning strait-jacket crimps the capacity of national labor and real estate markets to respond to changes in market conditions. Consider Professorville, a Palo Alto neighborhood of mostly single-family detached houses, perhaps a third with some historic value.²³ Professorville lies within walking distance of downtown Palo Alto and the railroad station that serves it. If unconstrained by zoning, a modern-day Joseph Eichler could plainly profit by buying up contiguous house-lots in Professorville and then redeveloping the site, perhaps for townhouses or a mid-rise condominium building. But, given the strength of NIMBY homeowners in an established neighborhood such as Professorville, Palo Alto on its own would never allow a densification of this sort. Local politics thus elevate the preferences of Professorville homeowners and historic preservationists over the interests of potential Silicon Valley housing consumers. Writ

²¹ *Ambler Realty Co. v. Village of Euclid*, 297 F. 307, 316 (N.D. Ohio, 1924), *rev’d*, *Village of Euclid v. Ambler Realty Co.*, 272 U.S. 365 (1926).

²² The inimitable Jane Jacobs came up with another apt analogy, the taxidermy of urban space. See Anika Singh Lemar, *Zoning as Taxidermy: Neighborhood Conservation Districts and the Regulation of Aesthetics*, 90 IND. L.J. 1525, 1539 n.91 (2015) (citing JANE JACOBS, *THE DEATH AND LIFE OF GREAT AMERICAN CITIES* 373 (Vintage Books 1992) (1961)).

²³ In 1979, Palo Alto first applied to the National Register of Historic Places for recognition of a Professorville Historic District. At the time, the proposed district comprised roughly seven square blocks. The city’s application included a map, reproduced <https://www.cityofpaloalto.org/civicax/filebank/documents/61616> at 16. That map indicates that buildings of some historical importance were present on about 60% of the lots in the proposed district, but that some 55 lots lacked a building of historic value. In 1993, Palo Alto unilaterally almost doubled the area of the Professorville historic district. See <https://www.cityofpaloalto.org/civicax/filebank/documents/61618>, at 13-14. These expanded boundaries are the basis of the estimate that one-third of Professorville’s structures have historic value.

large, these diffuse municipal zoning policies misallocate the use of urban land in the United States, and distort the spatial distribution of the nation's labor force. State legislatures should take notice.

I. MEASURING A ZONING ORDINANCE'S EXCLUSIONARY EFFECTS

This study gauges a locality's land-use policies from two of its published documents: its zoning ordinance and its zoning map.²⁴ The ordinance indicates the regulations applicable in each of the various zones, and the map identifies the zone locations and enables calculation of the acreage placed in each. The Article treats these documents as sincere expressions of local policy.

It is notable that *all* 41 localities studied in the three metros have elected to engage in zoning.²⁵ This is true even of the cities in Texas, where the City of Houston has famously refused to zone. Each of the 41 also posts an on-line version of both its zoning map and zoning ordinance. The availability of these online resources, seldom exploited by legal scholars, greatly facilitates research into zoning practices. The research entailed a selective reading of the texts of all 41 zoning ordinances, some 10,000 pages in the aggregate. It also entailed measurement of the acreage that a particular locality had placed in each of its various residential zones. Procedures for these computations, challenging in some instances, are described in Appendix B. Calculating the acreage zoned for multi-family development commonly proved to be the most onerous task. Total research time averaged over eight hours per locality.

Scholars who study land use regulation have bemoaned the lack of a consensus about how to measure the stringency of a particular set of controls. This Part introduces three metrics for measuring a suburb's exclusionary tilt. The three provide a numerical measure of the presence (or absence) of large-lot zoning, of small-lot zoning, and of zoning to permit multifamily housing. For each metric, results are provided not only for

²⁴ Appendix C reviews prior empirical studies of zoning practices.

²⁵ Cf. Rolf Pendall, Robert Puentes & Jonathan Martin, *From Traditional to Reformed: A Review of the Land Use Regulations in the Nation's 50 Largest Metropolitan Areas* 11 (Brookings Inst., Aug. 2006) (reporting that 8.5% of responding localities lacked zoning ordinances).

each of the three metros in the aggregate, but also for some of their 41 cities, towns, and counties.

These metrics, potentially applicable everywhere, enable analysis of zoning practices across space and time. A researcher could use them to generate comparable data for a Greater Indianapolis or Greater Tucson. The suburbs in Greater Austin may become less friendly to developers as the decades pass. The metrics provide an objective test for determining whether or not this will have occurred.²⁶

The denominator in each of the four metrics is the locality's total residentially zoned area, that is, the acreage in which its various zones permit some residential use as of right. In the three metros in the aggregate, this residentially zoned area constituted 79% of total land area, with the zones in the remainder solely permitting industrial, public-facility, commercial, or other non-residential uses. The percentage zoned for residential uses tends to be higher in the most exclusionary suburbs. But it dips—sometimes even below 50%—in suburbs that zone large areas exclusively for industry, such as the Silicon Valley cities of Santa Clara and Sunnyvale.²⁷

The basic premise of this study—that a locality's facial zoning policies are sincere—is contestable.²⁸ A suburb obviously retains authority to amend its zoning map

²⁶ Why three metros instead of, say, a random selection of 41 localities nationwide? Restricting the study to three specific urban regions had several advantages. It helped reveal, for example, the critical role of the state statutes that govern the incorporation of cities and cities' powers of annexation. Focusing on only three metros also permitted the devotion of greater attention to differences in terrain, climate, water supply, and other attributes that affect supply and demand for housing.

²⁷ Most contemporary zoning ordinances, indeed those of all 41 localities studied, are noncumulative. They not only set aside some areas exclusively for, say, industrial or public-facility use, but also ban residential uses in those zones. By contrast, the Supreme Court's famous decision in *Village of Euclid v. Ambler Realty Co.*, 272 U.S. 365 (1926), involved a cumulative zoning ordinance. Euclid then permitted, as it no longer does, the erection of houses and apartment buildings in industrial zones. See also Jenny Schuetz, *Guarding the Town Walls: Mechanisms and Motives for Restricting Multifamily Housing in Massachusetts*, 36 REAL EST. ECON. 555, 559 (2008) (documenting decline of cumulative zoning in Boston suburbs). This historical trend has greatly truncated the number of potential sites for dense residential development. See Roderick M. Hills, Jr. & David Schleicher, *The Steep Costs of Using Noncumulative Zoning to Preserve Land for Urban Manufacturing*, 77 U. Chi. L. Rev. 249, 251-56 (2010) (criticizing rise of noncumulative techniques).

²⁸ Most scholars treat localities' announced zoning policies as sincere. See, e.g., Edward

and zoning code (and general plan, if it has one). Local officials indeed might see advantages in adopting a wait-and-see approach. This strategy would entail the initial imposition of stringent zoning classifications, which local authorities might subsequently relax once they had received better information about the details of a proposed development. Officials employing a wait-and-see strategy might be better able to extract benefits from developers, such as design concessions, on-site exactions, and impact fees. Moreover, suburban zoning ordinances increasingly make some land-use decisions discretionary. A locality may expressly retain, for example, power to approve or reject a final site plan, subdivision map, or permit for a multifamily project. When this sort of discretion is built in, zoning policies are harder to divine from published documents.

The mass of data assembled in this research, however, permitted the induction of a fundamental fact: zone boundaries tend to be static, especially in a developed single-family neighborhood. U.S. suburbs, unlike their counterparts in many other nations, generally treat the detached house as royalty.²⁹ In the three metros examined, the various suburbs combined to set aside 91% of their residentially zoned land exclusively for detached single-family use.³⁰ And, in these neighborhoods, suburbs have been far more likely to tighten development standards than to relax them.³¹

Exceptions to these generalizations, of course, can be found.³² The agendas of Planning Commissions and Boards of Zoning Appeals, the local bodies that receive petitions for zoning changes, are hardly barren. And a few suburbs are strongly pro-

L. Glaeser & Bryce A. Ward, *The Causes and Consequences of Land Use Regulation: Evidence from Greater Boston*, 65 J. URB. ECON. 265, 267-68 (2009).

²⁹ See HIRT, *supra* note 6, at 6-7.

³⁰ These detached-house-only zones constituted 70.9% of the total land area of the 37 municipalities studied.

³¹ See *infra* text accompanying note 42.

³² It would be useful to complement the current study, which treats zoning as sincere, with empirical studies of patterns of zoning changes. Examples of the latter include, e.g., Been et al., *supra* note 8; John Mangin, *Ethnic Enclaves and the Zoning Game*, YALE L. & POL'Y REV. (2018). Also pertinent are studies of trends in the lot sizes of actual subdivisions. See, e.g., John Hasse, http://gis.rowan.edu/projects/exclusionary/exclusionary_zoning_final_draft_20110610.pdf (finding that, in the New Jersey counties studied, house-lots exceeding one acre had constituted 24% of the developed acreage prior to 1986, but increased to 46% during 1986-2007); Glaeser & Ward, *supra* note 28, at 268 (asserting that actual lot sizes of new homes in Greater Boston area rose from 0.76 acre in 1990 to 0.91 acre in 1998).

growth, most notably, in this study, Round Rock TX.³³ Round Rock officials likely would approve, particularly in one of its less-developed neighborhoods, a developer's application to rezone to permit a planned development involving mixed uses. Metrics to measure the policies of pro-growth suburbs present a special challenge.

A. A Primer on Lot-Sizes and Neighborhood Grain

Lot-size regulations, especially in the single-family neighborhoods that blanket most U.S. zoning maps, largely determine the ambiance of an urban area. They directly control neighborhood grain and strongly influence population density.³⁴ A small-lot, fine-grain neighborhood typically has a higher "walk score" than a large-lot neighborhood.³⁵ It also is likely to be more visually varied.

It is worth repeating that the 37 suburbs studied place 91% of their residential land in zones that only permit the construction of single-family detached houses. Of the 37, the two most zone-happy are Redwood City CA and Guilford CT. They each have at least seven distinct single-family zones, all with a different lot-size minimum. Six of the 37 suburbs, however, have only a single single-family zone. In ascending order of area, these are: East Palo Alto CA (5,000 square feet, hereinafter 5k); Rollingwood TX (15k); Atherton CA (1 acre); Los Altos Hills CA (1 acre); West Lake Hills TX (1 acre); and Orange CT (1-1/2 acres). An acre comprises 43,560 square feet, almost the size of a regulation-size American football field excluding the end zones. East Palo Alto's standard 5k lot therefore is slightly less than one-eighth of an acre. Use of a traditional reel mower to mow a 5k lawn would be feasible, but, for a 10k lawn, laborious. To mow a one-acre lawn, a sit-down power lawnmower is virtually a necessity.

Drafters of zoning ordinances typically regard minimum lot-size requirements as the most salient of their zoning controls. Milford CT, for example, uses *R-5*, *R-10*, and *R-30* as the names of three of its zones. In these instances, the number that follows *R-* refers to the minimum thousands of square feet required for a house-lot within that zone. Other types of zoning controls, such as height limits, parking requirements, and minimum front-

³³ See *infra* text following note 154.

³⁴ See KEVIN LYNCH, GOOD CITY FORM 265-68 (1981) (elaborating the notion of grain).

³⁵ JEFF SPECK, WALKABLE CITY (2013).

yard setbacks, also vary and may significantly affect house designs. But, in contrast to lot-sizes, these controls are virtually never incorporated into the names of zones.

Many readers may find it hard to comprehend the meaning of an abstract number of square feet of lot area. To capture the spirit of this research, I strongly urge you to open Google Earth, an app that provides aerial and street views of neighborhoods worldwide. Enter into the Google Earth search box the name of a locality that contains a single-family neighborhood familiar to you. Then figure out how to employ the ruler in the upper toolbar to measure the square footage of some of that neighborhood's lots (polygons). For many readers, going through this simple exercise would greatly enhance the import of what is to come.

How have residential lots for single-family detached houses typically been sized? Since the advent of zoning in the United States, subdividers have seldom offered house-lots less than 5k in area. Euclid, Ohio's 1922 zoning ordinance, the one that eventually reached the Supreme Court, set 5k as the required minimum in the village's most restricted single-family neighborhood.³⁶ Nearly a century later, Euclid continues to impose this same minimum. Yet smaller house-lots of course are possible. Lots less than 2k in area can be found in Gerritsen Beach, a neighborhood in Brooklyn NY that dates from 1922.³⁷ And pro-growth Houston TX, which lacks zoning, has adopted a subdivision ordinance that requires a lot of 3.5k for a single-family detached house in the city.³⁸

Many homebuyers regard a 5k lot as overly small. In Levittown NY, the epitome of Post-War suburbia, house-lots were roughly 6k. In the 1950s, Palo Alto imposed a 6k minimum in its basic single-family zone. This did not constrain Eichler, who commonly chose to offer slightly larger (7k or 8k) lots in south Palo Alto.³⁹

In a neighborhood where house lots are 8k or less, local officials typically compel a developer to install sidewalks on both sides of internal streets. In these relatively dense

³⁶ Village of Euclid v. Ambler Realty Co., 272 U.S. 365, 381 (1926).

³⁷ Thomas J. Campanella, *Long Before Levittown, Brooklyn Boasted Mass-Produced Housing*, CITYLAB, Jan 4, 2018.

³⁸ CITY OF HOUSTON, CODE OF ORDINANCES § 42-181 (applicable only to sewer areas of the city).

³⁹ CITY OF PALO ALTO, 1956 ZONING ORDINANCE § 6.11 (applicable to R-1 zone).

single-family neighborhoods, children commonly can walk to schools and shops. Especially where small lots are rectangular and deep, 5k-8k neighborhoods are heaven for trick-or-treaters. After collecting a handout of goodies, they know that the next stop is but a short amble away.⁴⁰

Prior to the advent of zoning, developers of several renowned upscale subdivisions voluntarily offered buyers lots of 10k or more. This occurred, for example, in Shaker Heights, a suburb just east of Cleveland OH, and in the Country Club District of Kansas City MO. Prior to zoning, however, most urban house-lots were smaller than 10k. Several contemporary zoning ordinances in the Greater Austin region in fact refer to 10k as a “large lot,” and rightly so.⁴¹ When lots reach 10k or more, sidewalks and pedestrians start to disappear. Although the developers of both Shaker Heights and the Country Club District voluntarily installed sidewalks on both sides of the street, sidewalks are absent in Los Altos, a Silicon Valley city that imposes a 10k minimum lot-size on 93% of its residential area. At Willingboro NJ, Levitt & Sons, the developer of the Levittowns, allowed house purchasers to select lots of different sizes. In neighborhoods of 10k lots, Levitt provided sidewalks on both sides, but provided none in neighborhoods of 12k lots. When lot-size minima rise to 20k (1/2 acre) or more, sidewalks, and prospects for visits by trick-or-treaters, both tend to be goners.

Guilford, the largest New Haven suburb in area, now requires a 4-acre minimum house-lot on 61% of its residentially zoned area. A 4-acre lot is 20 times larger than the lots in Eichler subdivisions in south Palo Alto. Fifty miles due north of the Silicon Valley lies Napa County CA, the home of celebrated vineyards. Napa County currently requires, in the hilly regions that comprise most of its territory, a minimum lot size of 160 acres (one-quarter square mile) per house. The 37 suburbs analyzed in this study have an average land area of 18.4 square miles. If subject to Napa County’s 160-acre minimum, an average-sized suburb would have room for 74 houses.

⁴⁰ Mark Oppenheimer, *It’s a Wonderful Block*, N.Y. TIMES MAG., Oct. 5, 2008, at 70, (lauding the virtues of two New Haven blocks, where lots are rectangular and about 7k in area).

⁴¹ See, e.g., CITY OF AUSTIN, LAND DEVELOPMENT CODE, § 25-2-55; CITY OF ROUND ROCK, ZONING CODE, § 46-135.

As the decades pass, suburbs are likely to increase the house-lot minima they require in their primary single-family zones. Orange CT and Woodbridge CT each have done so on three occasions.⁴² The research uncovered, in total, dozens of instances of these sorts of tightenings, and not a single instance of a relaxation. A ratchet seems to assure that a minimum-lot-size requirement only moves upward.

B. Metric One: The Incidence of Large-Lot Zoning

A simple metric for measuring exclusionary zoning is the percentage of residentially zoned land that a locality places in zones that require lots greater than, or equal to, a particular size.⁴³ A focal choice is a minimum lot of one-acre, a size that typically obviates the presence of sidewalks and trick-or-treaters. Table 1 presents, for the three metropolitan areas in the aggregate, zoning data not only for a minimum of one acre, but also for minima of one-and-a-half and two acres.⁴⁴

⁴² In its Residence zone, Orange required a minimum lot of 20k in 1938, 30k in 1951, 40k in 1959, and 60k in 2004. The minimum in Woodbridge's A zone was 20k in 1932, 60k in 1938, 65k in 1966, and 2 acres in 2001.

⁴³ Cluster zoning, an approach that many of the 41 localities authorize, does little to mitigate the wastefulness of large-lot minima. When a suburb permits clustering, a subdivider can reduce the total area of building lots by the amount of land dedicated as open-space. Clustering thus expands a subdivider's design options, and helps conserve wetlands and forests. WILLIAM H. WHYTE, *CLUSTER DEVELOPMENT* (1964), inspired this variation. See Glaeser & Ward, *supra* note 28, at 270 (fig. 3) (documenting how suburbs in the Greater Boston area have rapidly embraced cluster zoning).

But cluster development, unless accompanied by a density bonus, has no effect on population density. Moreover, the urban form of cluster developments commonly is mediocre. Clustering housing units into pods tends to isolate their occupants from their neighbors. . . .

⁴⁴ Some regressions indicate that large-lot requirements are associated with higher housing prices. See Edward Glaeser, Jenny Schuetz & Bryce Ward, *Regulation and the Rise of Housing Prices in Greater Boston* 23 (Pioneer Institute for Public Policy Research and Rappaport Institute for Greater Boston, Cambridge MA, 2006).

Table 1			
Metric One: Percentage of Residentially Zoned Land Requiring a Lot-Size above a Specified Minimum			
	1 acre or more	1-1/2 acres or more	2 acres of more
Silicon Valley	51.0%	36.1%	36.1%
Greater New Haven	67.3%	46.8%	31.4%
Greater Austin	32.1%	13.7%	13.7%

The New Haven area, where 67% of the residentially zoned land in the suburbs is restricted to single-family detached houses on lots of one acre or more, leads the three metros in large-lot zoning. Municipalities in the Austin area are, by this measure, the least prone to exclude. No surprise there. The Silicon Valley's results are middling. The figures there are much affected by the huge lot-size requirements that San Mateo and Santa Clara Counties impose in the Silicon Valley's foothill and mountain areas.

Table 2 indicates variations in the zoning practices of individual localities within the three metros. Each metro has at least one locality that places at least 99% of its residentially zoned land in ≥ 1 -acre zones, and also one or more that doesn't place any in that category. Table 2 also indicates for each metro, in brackets, the municipality with the greatest amount of acreage in ≥ 1 -acre zones.

Table 2 Municipalities with the Highest, Median, and Lowest Percentages of One-Acre Minimum Lot Zoning in Their Residentially Zoned Areas			
	Highest Percentage	Median Percentage	Lowest Percentage
Silicon Valley*	Atherton (100%), Los Altos Hills (100%) [most acres: Portola Valley]	Cupertino (33%)	Six cities at 0%, including Redwood City and Sunnyvale
Greater New Haven	Bethany (100%) [most acres: Guilford]	Hamden (61%)	West Haven (0%)
Greater Austin*	West Lake Hills (99%) [most acres: Georgetown]	Leander (38%)	Rollingwood (0%)

* Excludes unincorporated areas and neighborhoods in the Cities of Austin and San Jose

C. Metric Two: Allowing Detached Houses on Small Lots

Exclusionary zoning commonly is taken to be synonymous with requirements for multi-acre single-family lots. This is erroneous. Another finding of this study is the sharpness of variations in suburbs’ willingness to allow single-family detached houses on lots ranging from 5k to 8k, that is, Eichler-grained subdivisions. A suburb requiring 20k lots in all its single-family neighborhoods might be able to exclude homebuyers of modest income as successfully as a suburb requiring 5-acre lots.⁴⁵

Metric Three identifies a locality’s tolerance of relatively small lots for detached houses. The denominator, as usual, is the total acreage in zones that allow some residential use as of right. The numerator is the zoned acreage that would permit house-lots as small as the stated size. Table 3 presents the gross findings for the three metros for lots of three relatively modest sizes: 6k, 8k, and 10k.

⁴⁵ A larger lot tends to command a higher price, but, beyond 8k or so, at the margin not by much. See Edward Glaeser & Joseph Gyourko, *Zoning’s Steep Price*, REGULATION 24, 26-28 (Fall 2002).

Table 3: Percentage of Suburban Municipalities' Residentially Zoned Acreage That Permits Lots for Single-Family Detached Houses of:			
	≤6,000 sq.ft.	≤8,000 sq.ft.	≤10,000 sq.ft.
Silicon Valley*	22.9%	28.8%	39.5%
Greater New Haven	0.2%	1.0%	3.6%
Greater Austin	31.0%	39.5%	56.1%

* Excludes unincorporated areas and two neighborhoods in City of San Jose

Table 3 identifies a stunning outlier. New Haven suburbs are vastly the harshest on would-be developers of subdivisions of modestly sized house-lots. Only the New Haven suburbs of Hamden and Milford allow more than 2% of their residentially zoned territory to be developed into lots of 10k or less.⁴⁶ In contrast, in Austin suburbs such as Cedar Park and Round Rock, and in the Silicon Valley's East Palo Alto, that figure is over 80%. The Silicon Valley cities of Santa Clara and Sunnyvale also permit houses on lots of no more than 10k in over 90% of the territory they zone exclusively for single-family use.

The history of localities' tolerance of small house-lot subdivisions varies sharply. Of the 37 suburbs canvassed, the first to prohibit them was Atherton CA, which, in 1923, imposed a one-acre minimum throughout town. In the 1930s, several New Haven suburbs, such as Orange and Woodbridge, followed Atherton's lead, as did West Lake Hills TX in 1953. By contrast, during the 1950s, Palo Alto, like many of its neighboring cities in the plains of the Silicon Valley, permitted Eichler and other developers to subdivide the southern part of that city into detached houses on modestly sized lots. Palo Alto's current zoning in those neighborhoods, while impregnable to denser redevelopment, remains much as it was then. Austin suburbs now are exceptional in their willingness to zone undeveloped land for dense single-family development.

Table 4 helps unpack the gross data presented in Table 3. It reports only on

⁴⁶ For evidence supporting the notion that the pattern is New England wide, see Glaeser & Ward, *supra* note 28, at 269 (reporting that 57% of Boston suburbs have an average minimum house-lot requirement of 35k or greater); . . .

suburbs’ tolerances of houses on an 8k lot, one typical in an Eichler subdivision.

Table 4 Percentage of Residentially Zoned Land Where ≤8k House-Lots Are Permitted			
	Highest percentage	Median percentage	Lowest percentage
Silicon Valley	East Palo Alto (84.5%) [most acres: Sunnyvale]	Palo Alto (36.1%)	Four tied at 0%: Atherton, Los Altos, Los Altos Hills, Woodside
Greater New Haven	Milford (14.7%) [most acres: Milford]	0%. Only 3 of the 14 suburbs have a single-family zone that permits 8k lots.	Eleven tied at 0%.
Greater Austin	Round Rock (79.5%) [most acres: Georgetown]	Leander (24.9%)	Three tied at 0%: Bee Cave, Rollingwood, West Lake Hills

* The data reported exclude subareas of the cities of Austin and San Jose, and unincorporated areas in the Silicon Valley.

D. Metric Three: Permitting Multi-Family Housing as of Right

Denser residential developments tend to be more affordable. Metric Four tallies, for the various localities, the percentage of the residentially zoned land on which, as of right, a developer could build at least 8 dwelling units per acre. Examples of potentially lower-cost structures are apartment buildings, four or more abutting townhouses, and parks for mobile homes (“manufactured housing” is the contemporary euphemism). *Multi-family housing*, as used in this Article, refers to any of these forms of development, provided that the zoning ordinance permits at least 8 units per acre. Because homeowners tend to oppose proposals for dense housing nearby, local governments are reluctant to permit them. In all three metros, localities’ zoning ordinances commonly state that a

would-be developer of a multi-family project has to apply for and receive a special permit. This study assumes, however, that, if a locality had gone so far as to name its zone “multi-family,” “townhouse,” or the like, it would grant the permit.

Table 5 indicates the percentages of the residentially zoned land in the three metros that permit multi-family use, as just defined. Google Earth was used to examine the extent of existing development on these sites. In each instance, a judgment was made about whether or not the site had been 50% developed. If not, it was tallied as “undeveloped.” Table 5 also includes the results of these determinations.

	Both Developed and Undeveloped Sites	Undeveloped Sites Only
Silicon Valley	10.0%	0.2%
Greater New Haven	1.4%	0.3%
Greater Austin	6.0%	2.2%

As Table 5 implies, the Silicon Valley’s buildable areas currently tend to be more densely developed than those of the other two regions. The table also indicates the special hostility of New Haven suburbs to multi-family housing. Another notable finding is that *undeveloped* multi-family land is roughly ten times more commonly available in the Austin area than in the other two metros.

To provide more texture, Table 6 indicates variations in municipal policies governing the building of multi-family housing. In the three metros, the municipalities with the highest percentages of undeveloped land currently zoned for multi-family use were East Palo Alto CA (2.8%); Meriden CT (2.7%), and Bee Cave TX (7.3%). A multi-family housing developer looking for a permissibly zoned and undeveloped site would find fewer acres of it in the entire Silicon Valley than in any one of four different suburbs located northwest of Austin: Cedar Park, Georgetown, Leander, and Round Rock.

Table 6: Municipalities with the Highest, Median, and Lowest Percentages of Multi-Family Zoning in Their Residentially Zoned Area*			
	Highest Percentage	Median Percentage	Lowest Percentage
Silicon Valley	Mountain View (41.4%) [most acres: Sunnyvale]	Palo Alto (8.4%)	Tied at 0%: Atherton, Los Altos Hills, Woodside
Greater New Haven	Meriden (8.9%) [most acres: Meriden]	East Haven (0.6%)	Tied at 0%: Bethany, Branford, Madison, North Branford, Orange
Greater Austin	Bee Cave (12.8%) [most acres: Cedar Park]	Georgetown (2.8%)	Tied at 0%: Rollingwood, West Lake Hills

* The data reported exclude subareas of the cities of Austin and San Jose, and unincorporated areas in the Silicon Valley.

E. How Do Suburbs Zone Large Undeveloped Tracts of Land?

In a developed neighborhood, zoning is largely frozen. A suburb's zoning of its tracts of mostly undeveloped land therefore are particularly instructive. Table 7 reveals how localities in the three metros zone a tract of land that satisfies all of the following four criteria. It is: (1) privately owned; (2) mostly undeveloped; (3) zoned for residential development; and (4) between 20 and 40 acres in area. Tracts meeting all four criteria of course may not have been developed for a good reason. They are likely to disproportionately include steep hillsides, ledge, and wetlands. They also may be remote from utility services and job opportunities.⁴⁷

⁴⁷ Slopes in excess of 15% plainly increase the costs of housing supply. See Albert Saiz, *On Local Housing Supply Elasticity*, 125 Q.J. ECON. 1253 (2010).

Table 7 Residentially Zoned, Privately Owned, and Mostly Undeveloped Tracts of 20-to-40 Acres			
	<i>Silicon Valley</i>	<i>Greater New Haven</i>	<i>Greater Austin</i>
Number of Qualifying Tracts	57	242	123
Percentage of Tracts Zoned to Require House-Lots of at Least One-Acre	96.5%	90.9%	41.5%
Percentage of Tracts Zoned to Permit House-Lots ≤ 8,000 sq.ft.	3.5%	0.4%	47.3%
Percentage of Tracts Zoned to Permit Multi-Family Development	1.8%	0.4%	17.1%

Tracts that satisfy the four criteria exist in only 4 of the 15 suburbs in the Silicon Valley. In that metro, 81% of these largish, privately-owned, and undeveloped tracts are situated high in the upper-foothill and mountainous areas of Portola Valley, Woodside, and unincorporated Santa Clara County. None of those localities permit, on these tracts, a house-lot of less than 5 acres.

In the long-settled New Haven area, by contrast, the fourteen suburbs have an average of 17 of these privately owned, residentially zoned, and undeveloped tracts. Each town has at least 2. As Table 7 indicates, the New Haven suburbs require a house-lot of at least one acre on 91% of these largish undeveloped tracts, a figure higher than that for their residentially zoned land in general (67%).⁴⁸ New Haven suburbs, firing the second barrel of exclusion, permit house-lots of 8k or less on a mere 0.4% of these undeveloped tracts.⁴⁹ And only Hamden CT zones an undeveloped private 20-to-40-acre tract for multi-family housing. In the Silicon Valley, there are two such sites, both in North San

⁴⁸ See *supra* Table 1.

⁴⁹ New Haven suburbs, strongly averse to walkable single-family neighborhoods, require house-lots of at least 15k on 98.3% of these large undeveloped private tracts.

Jose.

The data in Table 7 perhaps best demonstrate the relatively pro-growth policies of cities in the Austin metro. Austin localities would permit the development of Eichler-size 8k subdivisions on 47% of their privately-owned undeveloped 20-to-40-acre parcels, a percentage more than 10 times greater than the comparable percentage in the Silicon Valley, and 100 times greater than the one for Greater New Haven. Surprisingly, Austin localities are particularly eager to authorize dense development on 20-to-40-acre undeveloped private tracts. They authorize multi-family development on 17% of them, far in excess of the 6% for their entire residentially zoned area.⁵⁰ The Williamson County suburbs of Cedar Park, Leander, and Round Rock each contain four or more of these tracts, all of them ripe for dense development. Georgetown, the oldest suburb northwest of Austin, does impose a 2-acre house-lot requirement on 60% of its undeveloped 20-to-40-acre private tracts. But Georgetown does not fire the other exclusionary barrel. Georgetown would permit each of the 19 remaining 20-to-40 acre tracts to be subdivided into house-lots as small as 5.5k.

II. THE SILICON VALLEY: SLAMMING THE DOOR ON GROWTH

But enough, for a time, of tables. The next three Parts provide verbal descriptions of the geography, governance, and zoning history of the three metros, considered in their usual order.

These zoning histories are distinct. By the 1930s, and certainly the 1950s, most New Haven suburbs have been committed to exclusion. Most suburbs northwest of Austin, by contrast, currently have policies that affirmatively favor housing development. The history of Silicon Valley zoning has been more volatile. During the immediate Post-War period, many Silicon Valley suburbs were pro-development. Their zoning ordinances then seldom imposed binding constraints on developers. The zoning traffic-light later turned red. Between roughly 1965 and 1975, politics in upscale suburbs such as Palo Alto, and even less upscale ones such as Mountain View and Redwood City, turned

⁵⁰ *See supra* Table 5.

anti-development.⁵¹ This shift had two main causes. The first was the advent in the late 1960s of the environmental movement, a cause particularly fervent in the Bay Area. Stanford graduates Denis Hayes and Pete McCloskey, the latter a Bay Area Congressman, were key organizers of Earth Day 1970, the event that ushered in a nationwide surge of environmentalist sentiment. Responding to this shift in voters' priorities, California legislators enacted several measures that strengthened the legal toolkits of anti-development forces, and local zoning officials increasingly embraced antigrowth policies.⁵² Members of the California state judiciary simultaneously shifted course. Until 1967, California judges had tended to defer to a locality's zoning choices, whether pro- or anti-development. After 1967, however, the California Supreme Court began to side with the anti-development party "as if nothing else in the case mattered."⁵³ These legal changes, combined with topographical constraints such as the ruggedness of the Santa Cruz Mountains, stifled housing supply. When demand by well-paid tech workers to live in the Silicon Valley surged, house prices soared.⁵⁴

The second cause of the shift toward antidevelopment policies, ironically, was

⁵¹ On the evolution of Palo Alto policies, see Stephen Coyle, *A Far Cry from Euclid*, 4 STAN. ENVTL. L. ANN. 83 (1982) (denouncing Palo Alto's exclusionary turn). See also *infra* text accompanying notes 60, 70-71 & 74. Mountain View, Palo Alto's neighbor to the south, long served as an outlet for relatively cheap housing in the region. During the 1970s, however, even Mountain View's zoning politics turned against development. See Nicolas Ramniceanu, *Mountain View: From Pro-Growth to No-Growth*, 4 STAN. ENVTL. L. ANN. 50, 54 (1982). During the 1970s, for example, Mountain View drastically scaled back its plans to develop the North Bayshore, see *id.* at 58-61, the area where, in 2017, it would later authorize a huge Google complex. By 1975, Redwood City had committed itself to preventing multifamily housing in its single-family neighborhoods. Stephen F. Cook, *Redwood City: High Housing Prices and No Growth*, 4 STAN. ENVTL. L. ANN. 68, 76-77 (1982). I should disclose that these three authors wrote these articles for a seminar that I taught at Stanford Law School.

⁵² Most important additions to the toolkit were the California Environmental Quality Act of 1970 and the requirement that a city conform its zoning to its comprehensive plan. See Ellickson, *supra* note 2, at 14-15. On the ensuing opposition to housing development in the Bay Area, whatever the proposed location, see BERNARD J. FRIEDEN, *THE ENVIRONMENTAL PROTECTION HUSTLE* (1979).

⁵³ See Joseph DiMento, et al., *Land Development and Environmental Control in the California Supreme Court: The Deferential, the Preservationist, and the Preservationist-Erratic Eras*, 27 UCLA L. REV. 859, 868 (1980).

⁵⁴ See Glaeser et al., *supra* note 10, at 359 (finding that, in 1999, the "zoning tax" on the production of single-family houses was higher in San Jose and San Francisco than in any of the other 19 metros studied).

what Eichler and other entrepreneurs had accomplished during the 1950s and 1960s. By 1970, these homebuilders had transformed much of the Silicon Valley's most buildable land from agricultural fields into neighborhoods of single-family houses. The owners of these houses came to passionately oppose denser development in, or even near, their neighborhoods. A section of this Part marshals evidence of this phenomenon: the zoning strait-jacket that prevents change in an established single-family neighborhood. In what may not be a coincidence, around 1970 the rate of U.S. economic growth began to slow.⁵⁵

A. An Introduction to the Silicon Valley

The phrase "Silicon Valley" inaptly describes the region that now bears that name. This Article focuses on a territory that would be more accurately called the "Silicon Slope." The land in this region forms an incline, roughly 8-to-12 miles wide, that ascends westerly from the San Francisco Bay to the 2000-foot-high ridge of the Santa Cruz Mountains.⁵⁶ Along the crest of that ridge runs Skyline Drive, the western border of the region. The suburb at the northern end of the Silicon Valley, as defined here, is Redwood City, and, at the southern end, the City of Saratoga. Near Skyline Drive runs the San Andreas Fault, whose presence understandably has affected building designs in the region.

The lands within this sloped terrain lie in four bands, largely parallel. Each of the four warrants a byname. The band furthest east, a mile or so wide, is the *Bayshore*. Much of it consists of formerly filled tidal mud flats and salt marshes, and it is the band most subject to flooding risks. The Bayshore Expressway (U.S. 101) serves as the western border of this band. Next to the west lies the band of *Plains*, roughly three miles in width.

⁵⁵ According to Robert Gordon, the U.S. economy grew rapidly beginning in 1870, but after 1970 began to slow. See ROBERT J. GORDON, THE RISE AND FALL OF AMERICAN GROWTH: THE U.S. STANDARD OF LIVING SINCE THE CIVIL WAR (2016). Gordon primarily attributes the decline to a falloff in great inventions. At the end of his work, however, he states that excessive land use regulations also may have contributed. See *id.* at 649.

⁵⁶ The direction in fact is not west, but southwest. The region's residents understandably think that the San Francisco Bay lies to the east, when it actually lies northeast or even north of the Silicon Valley. From that erroneous assumption follows the conception that the mountains are to the west. This distortion of geography results in oddities, such as the name East Palo Alto, a city located due north of downtown Palo Alto.

This is the most densely settled portion of the Silicon Valley. Through the heart of the Plains runs El Camino Real, the area's oldest road and currently mainly a commercial strip. Further to the west lies the next band, the *Foothills*. The approximate boundary between the Plains and the Foothills is the aptly-named Foothill Expressway, two of whose northern extensions are Junipero Serra Boulevard and Alameda de La Pulgas. In the portion of the Silicon Valley that extends north from Cupertino, the scenic Junipero Serra Freeway (I-280) roughly bisects the Foothills band. The last of the four bands is the *Mountains*, a strip whose approximate width expands from 2 miles in the northern part of the Silicon Valley, to 3 miles in the south.

To an observer concerned with future housing production in the region, the zoning histories of the Plains and the Foothills warrant the most attention. The Mountains, rugged and remote, hold scant promise for housing development. The relative smallness of the Bayshore band makes it less important, although, since 2000, the Bayshore in fact has been the site of many of the Silicon Valley's densest housing developments.⁵⁷

During the 1950s and 1960s, San Mateo and Santa Clara Counties, which encompass not only the Silicon Valley but a much larger area, tripled in population, adding just over a million residents. Yet, by 1970, housing prices around Palo Alto were only 20% above the national average.⁵⁸ The 1950s saw some omens, however, particularly in the Foothills, that zoning might become more stringent. As the 1960s progressed, the omens multiplied and spread to the Plains. The next sections explore these histories.

B. Zoning in the Foothills

Few tracts in the Foothills are flat, making them more expensive to develop than tracts in the Plains. Nonetheless, especially where demand for housing is robust, the

⁵⁷ See *infra* text accompanying notes 97-100.

⁵⁸ See *supra* note 2. In retrospect, the modesty of the increase in Silicon Valley housing prices during the 1970s is puzzling. Perhaps homebuyers underestimated the later intensity of demand to live in the region, or anticipated that the anti-growth political turn would not prove to be permanent. The high transaction costs of acting as an arbitrageur in a housing market also undoubtedly limited the number of speculative purchasers.

presence of slopes hardly prevents development of single-family houses. The steep hills above Berkeley and Oakland CA are peppered with houses up to an elevation of 1000 feet above San Francisco Bay. Many of these hillside houses in the East Bay are situated on lots less than 8k in area, a size that the zoning officials who control the Silicon Valley's Foothills virtually never permit.

Beginning in the mid-1950s, housing development in the Silicon Valley's Foothills started to become far more difficult. Of the many pertinent legal events, three warrant emphasis. The first was the incorporation of a new set of suburbs. Prior to the mid-1950s, most of the lands in the Silicon Valley's Foothills had lain in unincorporated areas of San Mateo and Santa Clara Counties. During that era, neither county zoned its Foothills nearly as strictly as it later would. In the 1950s and thereafter, Foothill residents accomplished a handful of incorporations that shifted zoning powers from the counties to newly created municipalities. Three of these new suburbs encompassed lands mostly in the Foothills: Los Altos Hills (1956), Woodside (1956), and Portola Valley (1964). On average, these three towns currently require, on 98% of their residentially zoned territory, a house-lot of at least one-acre. Two acres out of their combined 30 square miles are zoned for multi-family housing. Some of the world's richest individuals, among them Steve Jobs, would later buy houses in these suburbs. Two incorporations further south created Cupertino (1955) and Saratoga (1956), cities whose borders extend from the Plains up into the Foothills. The homeowners who pushed for these various incorporations typically were seeking to prevent annexation by a neighboring city, whose zoning they would be less able to influence.

The second notable set of events was Palo Alto's annexation of large amounts of Foothill and Mountain land between 1959 and 1968. These moves doubled the footprint of the city, and were primarily motivated to retard housing development in the annexed areas. Palo Alto's current shape is bizarre. Its northern half lies in the Plains, just east of the campus of Stanford University, which sits mostly in unincorporated Santa Clara County. A narrow strip connects that northern portion to Palo Alto's southern half, which lies in the Foothills and Mountains. In 1959, Palo Alto had undertaken its first major

Foothill annexation, primarily to open a two-square-mile park, now known as Foothill Park.⁵⁹

During the 1960s Palo Alto politics was riven between representatives of the “Establishment,” who generally favored growth in the city’s Plains sector (its northern half), and an emerging, and eventually triumphant, coalition of “Residentialists,” whose central aim was to slow development throughout the city. Members of both factions were largely united, however, in their skepticism of housing development in Palo Alto’s Foothills. Beginning in 1971, Palo Alto began to acquire more land in the Foothills, and, in areas not acquired, to impose a 10-acre minimum house-lot requirement. Courts eventually ruled that these down-zonings had constituted takings of landowners’ property, decisions that required to Palo Alto to provide compensation.⁶⁰ Although sometimes expensive to its taxpayers, Palo Alto’s various efforts to keep its Foothills undeveloped have been largely successful. In 2018, the half of Palo Alto that lies in the Foothills and Mountains contained fewer than 100 housing units, a tiny fraction of the more than 20,000 in Palo Alto’s Plains.⁶¹

Stanford University owns 9 square miles of lands in the Foothills, mostly in unincorporated areas of San Mateo and Santa Clara Counties. These Stanford lands, if valued at an average of \$2 million per acre—a plausible figure in light of Silicon Valley’s astronomic housing prices—would be worth almost \$12 billion, or about one-half of the University’s endowment. The third notable event was a set of county decisions to ban residential development on virtually all of Stanford’s Foothills lands.⁶² These tracts lie

⁵⁹ A local physician who had owned a ranch in the Foothills had offered to sell it to the Palo Alto at a bargain price. His offer was conditioned on the city’s agreement to set aside the land as open space. See Laurence Livingston & John A. Blayney, *Foothill Environmental Design Study: Open Space vs. Development: Final Report to the City of Palo Alto* (1971); . . .

⁶⁰ See *Arastra Ltd. Partnership v. City of Palo Alto*, 401 F. Supp. 962 (N.D. Cal. 1975), vacated 417 F. Supp. 1125 (N.D. Cal. 1976); *Eldridge v. City of Palo Alto*, 129 Cal. Rptr. 575 (Cal. App. 1976).

⁶¹ In 1963, California enacted the first of several reforms that changed procedures for local boundary changes. These were designed to deter the incorporation of new cities, and also to prevent shoestring annexations such as Palo Alto’s. See Dolores Tremewan Martin & Richard E. Wagner, *The Institutional Framework for Municipal Incorporation: An Economic Analysis of Local Agency Formation Commissions in California*, 21 J.L. & ECON. 409 (1978).

⁶² Stanford’s website asserts that the University’s total landholdings amount to 8180

west of the main Stanford campus, beyond Junipero Serra Boulevard. The most famous spot on these holdings is the Stanford Dish, a radio telescope that has become a destination point for joggers. Although some of Stanford's foothill lands are too steep to be developed, many are not. Beginning in the 1940s, for example, Ladera, a subdivision of 520 houses on 9k-to-15k lots, was developed in the area that lies between Stanford's Foothill holdings in the two counties.

As joggers to the Dish well know, Stanford's lands in the Foothills are almost entirely undeveloped. Both county zoning policies and the university's own decisions have contributed to these outcomes. Santa Clara County, which contains a slight majority of Stanford Foothill lands, places about two-thirds of them in an open-space-field-research zone that flatly forbids residential structures. For virtually all of the remainder, Santa Clara County requires a minimum lot-size of 20 acres per residence.⁶³ The County also delineates an "Academic Expansion Boundary" that largely tracks Junipero Serra Boulevard. This boundary essentially confines Stanford's building projects on its Santa Clara County lands to tracts that lie eastward in the Plains.⁶⁴

Further north, Stanford also owns roughly 4 square miles of undeveloped Foothill land in unincorporated San Mateo County. In 1973, culminating conservation efforts begun in the 1950s, Stanford's Trustees set aside the most elevated one-third of these lands as the Jasper Ridge Biological Preserve. With elevations rising from 200 to 700 feet above sea level, Jasper Ridge was a prime candidate for this designation. For the balance

acres, or almost 13 square miles. <http://facts.stanford.edu/about/lands>.

⁶³ The 2000 Stanford Community Plan and the interconnected Santa Clara County General Use Permit can be found at https://www.sccgov.org/sites/dpd/DocsForms/Documents/SU_CP.pdf. The plan includes a map that designates virtually all of Stanford's Foothills either as "Open Space and Field Research" or "Special Conservation." *Id.* at 27. *See also id.* at 84: "From the County's viewpoint, maintenance of the open space in the Stanford foothills is a central strategy for meeting the General Plan objectives of resource conservation and compact urban development. Concentration of academic development inside the AGB [Academic Growth Boundary] allows for retention of the open space character of the land outside of the AGB, while continuing to meet the University's land use objectives."

⁶⁴ Stanford's 2017 application to Santa Clara County contemplates "construction of up to 3,150 net new housing units for students, faculty and staff," all of them on sites within the Academic Growth Boundary, that is, east of Junipero Serra. *Id.* at Housing section, 3-3, 3-7 (2017).

of its Stanford lands, San Mateo County's zoning essentially limits uses to single-family detached houses on lots of at least one acre. But there is virtually no housing on them, perhaps because most are part of California's officially designated Junipero Serra (I-280) Scenic Corridor. The few improvements on Stanford's lands in the San Mateo County Foothills instead serve Stanford's linear accelerator (SLAC) and various equestrian facilities.

Although Stanford has objected to some of the zoning controls that the counties have placed on its Foothills lands, it seems to have acquiesced in many of them.⁶⁵ It agreed, for instance, to set aside Jasper Ridge as a biological reserve. Given the focus of this Article, the significant fact is that virtually *none* of Stanford's Foothill lands currently are devoted to housing. To enable agglomeration efficiencies, an urban area requires density. The decisions of the various governing institutions to set aside the Stanford Foothills as rural view-sheds are in obvious tension with the affordability of Silicon Valley housing.

The zoning policies that San Mateo County and Santa Clara County apply to their Foothill areas is pertinent to the lively scholarly debate about whether a populous local government, such as one of these counties, is more likely than a small suburb to be pro-development.⁶⁶ Prior to the 1950s, neither county sought to strictly limit development in their unincorporated Foothills. In the 1920s, for example, San Mateo County permitted the subdivision of Los Trancos Woods, a summer house community of roughly half-acre lots at an elevation of about 1000 feet. And in the 1940s, it permitted, in the lower Foothills due west of Palo Alto, the development of Ladera, a major subdivision of medium-sized lots.

All politics, it is said, is local. The current practices of San Mateo and Santa Clara Counties indicate, as does this Article's strait-jacket thesis, that zoning politics actually is

⁶⁵ The internal politics of any university are complex. Some factions within Stanford, such as its fundraisers and administrators involved in recruitment, likely would support a weakening of the counties' zoning controls. Other factions, perhaps joggers to the Dish and the faculty members who currently own houses on campus, might support perpetuation of the regulatory status quo. . . .

⁶⁶ This is an aspect of the Growth Machine debate, discussed *infra* text accompanying notes 182-186.

hyper-local. In zoning matters, the officials who currently govern these counties give special weight to the preferences of voters who currently live closest to the site in question. San Mateo County thus requires a mere 5k house-lot in North Fair Oaks, a blue-collar neighborhood in its Plains. But the County's required house-lot for Emerald Lake Hills, an unincorporated area in the Foothills, is 12k, in line with the requirements of surrounding suburbs. Santa Clara County similarly requires 5k lots in blue-collar Burbank, but 20k lots in the fancier neighborhood of Loyola.

For Stanford University's lands in the Foothills, by contrast, the two counties now appear to defer to the wishes of groups such as the Committee for Green Foothills. Santa Clara County's requirement of a 20-acre minimum for house-lots in Stanford's Foothills is the strictest in the entire Silicon Valley. And while San Mateo County's nominally requires only a 40k minimum lot on its Stanford Foothill lands, those lands remain virtually undeveloped.

C. Zoning in the Plains

The stakes of housing consumers are greatest in the Plains, the natural locations of the Silicon Valley's densest residential developments. This band is relatively accessible, and also relatively cheap to provide with infrastructure. In 1945, orchards covered much of the Plains, particularly in the south. During the 1950–1965 period, Eichler and other homebuilders rapidly turned these formerly agricultural lands into residential neighborhoods. By 2015, not a single 20-to-40-acre tract that was privately-owned, undeveloped, and residentially zoned, remained in the Plains. Future housing production in the Plains of the Silicon Valley thus necessarily will entail redevelopment.

A dozen Silicon Valley cities zone the lands of the Plains. Their policies vary. The three most exclusionary, listed from north to south, are Atherton, Los Altos, and Saratoga. Atherton, whose requirements are the strictest, was born to zone. In 1923, six years after California first had authorized localities to engage in zoning, local residents incorporated Atherton to ward off an annexation by neighboring Menlo Park. The town promptly adopted a zoning ordinance that banned all uses other than single-family

detached houses, and required, throughout the town, at least one acre per house-lot.⁶⁷ By 2018, house prices of \$10 million had become the norm in Atherton. Los Altos, the least fancy of the three exclusionary Plains suburbs, requires a minimum house-lot of 10k in most neighborhoods. Saratoga was incorporated in 1956 to forestall annexation by the City of San Jose. Saratoga requires a house-lot of one-acre or more in 56% of its residentially zoned area, and of 10k or more, on 98%. Together, these three Plains suburbs zone 1% of their lands for multi-family housing.

The other nine cities in the Plains zone far less strictly. Indeed, through roughly 1965, their zoning ordinances seldom constrained a developer shopping for land. In the 1950s, Palo Alto, the most upscale of the nine remaining Plains cities, required a house-lot of only 6k in south Palo Alto, 1.5% of the City's current minimum requirement in its Foothills section (10 acres). Six of the other eight non-exclusionary Plains suburbs also have chosen 6k, or less, as their standard minimum house-lot. In this respect, the Plains cities of the Silicon Valley echo practices in Greater Austin, but hardly those in Greater New Haven.

1. Zoning for Multifamily Housing

The nine non-exclusionary Plains suburbs traditionally have been relatively generous in permitting apartment construction. In 2015, they together zoned 24% of their residentially zoned land for some form of multi-family housing—including townhouses and mobile home parks—at a density of at least 8 dwelling units per acre. Mountain View, the home of Google and the suburb just south of Palo Alto, zones 41% of its residential land in this fashion, the highest percentage of any Plains city. And Redwood City, the City of Santa Clara, and Sunnyvale, all allow multi-family development on over a quarter of their residentially zoned lands. Consumers looking for relatively inexpensive housing have disproportionately flocked to these cities, and also to North San Jose.

New multifamily projects, however, are far from easy to build in the Plains of the Silicon Valley. Of the many sites zoned for multi-family use, 97.8% are already developed in that manner. And many of these existing multi-family structures are no

⁶⁷ See CAL. STATS. 1917, p.1419; Ex Parte White, 234 P. 396 (Cal. 1925).

more than two-stories high.⁶⁸ Effective relief for housing consumers will require somewhat taller buildings, and, in some cases, densities as high as 20–30 dwelling units per acre or more. Because residents of single-family neighborhoods, however, fiercely oppose proposed projects of that sort nearby, the densest recent multifamily developments in the Silicon Valley have actually been built in the Bayshore, not the Plains.

The history of high-rise apartment buildings in Palo Alto, the epicenter of the Silicon Valley, is particularly instructive.⁶⁹ Downtown Palo Alto is centered on University Avenue. In 1929–1930, when zoning was still young, entrepreneurs erected, within two blocks of University Avenue, three 6-or-7 story apartment buildings. The next Palo Alto apartment buildings equal or greater to this height went up in 1960–1965, when the city approved four more, including the 101 Alma Street condos, the city’s tallest at 14 stories. By 1972, slow-growth Residentialists had won control of the Palo Alto city council from the pro-development Establishment.⁷⁰ The Residentialists promptly imposed a maximum height-limit of 50 feet (roughly 5 stories) on *all* new buildings in Palo Alto. A half-century later, this basic 50-foot limit remains in place.⁷¹ And, in 2018, each of Palo Alto’s multifamily zones actually was more restrictive, prohibiting heights above 40 feet.⁷²

⁶⁸ The City of Santa Clara, traditionally a suburb that has welcomed apartment buildings, limits their heights to two stories in its two most ubiquitous multifamily zones (R3-18D and R3-25D).

⁶⁹ The Emporis website provides data on the tallest buildings in various cities. The list for Palo Alto can be found at <https://www.emporis.com/statistics/tallest-buildings/city/101892/palo-alto-ca-usa>.

⁷⁰ <http://www.paloaltopulse.com/2014/10/01/palo-alto-pulse-asks-what-is-a-residentialist/>

⁷¹ A number of provisions of Palo Alto’s zoning ordinance reflect this policy. *See, e.g.*, § 18.16.060 tbl. 4 (maximum height of 50’ in mixed-use zones, including the downtown commercial area along University Avenue); § 18.20.040, tbl. 2 (maximum height of 50’ in industrial zones). Palo Alto, however, does retain the power to waive this height limit in return for the donation of public amenities. When a local developer proposed, in 2012, a deal of this sort on University Avenue, however, Palo Alto shot it down. <https://www.mercurynews.com/2014/09/09/palo-alto-council-apologizes-over-two-recent-land-use-proposals/?clearUserState=true>

⁷² The RM-15 zone limits building heights to 30 feet, RM-30 to 35 feet, and RM-40 to 40 feet. See CITY OF PALO ALTO, ZONING REGULATIONS § 18.13.040. Palo Alto’s immediate neighbors currently are more tolerant of tall buildings. In Mountain View, the 10-story Avalon

Transit nodes typically are conducive to dense development. Palo Alto nonetheless limits the heights of apartment buildings near both of its two Caltrain stations. In 2018, most buildings within a half mile of the California Avenue station were two stories or less. The tallest, largely along California Avenue, comply with the 40' height limit that Palo Alto sets for its "transit-oriented" zone.⁷³ The main Caltrain station in Palo Alto, located near University Avenue, has a semi-rural feel, in part on account of its proximity to open space on the Stanford campus. Even on University Avenue in nearby downtown Palo Alto, the city's densest area, buildings taller than 4-stories are exceptional. And virtually all of the exceptions date from before 1972.

An incident in the early 1980s illustrates the Residentialists' aversion to dense housing in the Plains of Palo Alto. Stanford University then proposed to erect in the city an 1100-unit mid-rise apartment development, Stanford West, for members of the university's administrative staff. The project would have been situated within walking distance of both the Stanford Shopping Center and the center of campus. None of Palo Alto's many existing single-family neighborhoods lay within a mile of the proposed site. Stanford nonetheless came away with nothing. In the words of the university official who managed the Stanford West proposal, "we got blown out of the water."⁷⁴ The scale of Stanford West may partly have doomed it. In more recent decades, Stanford has occasionally persuaded Palo Alto to approve less massive multi-family housing developments, but typically on sites far distant from single-family houses.

2. The Zoning Strait-Jacket in Neighborhoods of Detached Houses

Most homeowners regard their house as one of their chief financial assets, and are understandably concerned about maintaining its value. William Fischel, an esteemed scholar of the politics of zoning, has famously described homeowners as Homevoters.⁷⁵

Towers opened in 2002, and in Menlo Park, the 11-story Hotel Nia in 2018.

⁷³ See *id.*, § 18.34.040 tbl. 2.

⁷⁴ [Stanford Daily 19850419_0001.pdf](#). Stanford's amended application in 2017 to Santa Clara County for a new general use permit lists its three subsequent, and successful, attempts to build apartments in Palo Alto. The three projects, completed between 1987 and 2018, entail a total of about 900 units. Single-family houses surround none of the three sites.

⁷⁵ WILLIAM A. FISCHEL, *THE HOMEVOTER HYPOTHESIS* (2001).

And political scientists have corroborated that homeowners indeed are relatively active in local politics.⁷⁶

This section adduces evidence of Homevoters' political power. It asserts that, in a suburban neighborhood zoned and actually developed for detached houses, local governments virtually never approve zoning changes to retrofit land for denser development.⁷⁷ This is true even in pro-growth Austin.⁷⁸ The use of *strait-jacket* in this Article's title refers to this central finding.⁷⁹ The swaths of American suburbia frozen in this fashion are huge.⁸⁰ The localities that govern the Plains of the Silicon Valley, for example, permit solely single-family detached houses in 76% of their residentially zoned territory.⁸¹ And in the Foothills and Mountains, the percentage exceeds 99%.

Because published studies of the histories of zoning changes are sparse, to support the thesis the Article adduces evidence from a scattering of suburbs.⁸² The first group

⁷⁶ See J. ERIC OLIVER, *DEMOCRACY IN SUBURBIA* (2001); Andrew B. Hall & Jesse Yoder, *Does Homeownership Influence Political Behavior? Evidence from Administrative Data* (August 7, 2018) (providing evidence that home owners are particularly active when local zoning issues arise); . . .

⁷⁷ Restrictive covenants, which may be even more resistant to change than zoning, can add to this rigidity.

⁷⁸ See *infra* text accompanying note 214.

⁷⁹ Cf. Gerard H. Dericks & Hans R.A. Koster, *The Billion Pound Drop: The Blitz and Agglomeration Economics in London* (CEP Discussion Paper No 1542, April 2018) (finding that bombed areas of London later were sites of more vigorous redevelopment).

⁸⁰ Especially outside of historic districts, most cities of course permit the owner of a house to renovate it, expand it, and even raze and replace it, but only with another single-family detached house.

⁸¹ In the City of Los Angeles, one of the densest U.S. cities, more than 75% of the residentially zoned territory is set aside solely for single-family houses. <https://la.curbed.com/2018/9/10/17827982/single-family-houses-los-angeles-zoning-rules-explained?silverid=MzEwMTkyMjYyOTgwS0hi>

⁸² Many scholars of course have detected that zoning in an existing single-family neighborhood is relatively impregnable. But none have systematically marshaled evidence on the issue.

Eric Steele's valuable study of zoning changes in Evanston IL cautions against overstating the strait-jacket effect. Evanston, a dense suburb north of Chicago, had been largely developed by 1930. Steele's findings certainly support a mild version of the present thesis:

Community opposition is a more potent force than is community support, and both are more powerful in the context of a single-family neighborhood. This conclusion is consistent with what we have seen to be the central impulse of urban zoning—conserving the character of existing residential areas, particularly single-family neighborhoods.

Eric H. Steele, *Participation and Rules—The Functions of Zoning*, 1986 AM. B. FOUND. RES. J.

includes some of the most famous U.S. suburbs, namely, the three largest Levittowns, and Euclid, Ohio. Attention then returns to the Silicon Valley, specifically to Palo Alto and East Palo Alto. Their stories are particularly instructive because market pressures to redevelop single-family neighborhoods in these cities have been especially intense.

The first of the Levittowns, in Nassau County, New York, took wing in the late 1940s. It eventually comprised 17,000 detached houses. Many of Levitt's purchasers quickly remodeled their houses to add to their curb appeal. But these homeowners also were committed to preserving the single-family character of their neighborhood. In 1975, when some of the covenants assuring single-family use were about to expire, local zoning authorities adopted a special "Levittown Planned Residence District."⁸³ This was explicitly designed to freeze the single-family character of this huge expanse.

Levitt & Sons developed Willingboro NJ, the last of its three massive developments, mostly in the 1960s. As in Levittown NY, Willingboro Township's current zoning ordinance places *all* Levitt single-family neighborhoods in zones that permit only to single-family detached houses.

Evidence from Levittown PA is more mixed. Falls, Middletown, and Bristol Townships largely control the local zoning.⁸⁴ Consistently with the strait-jacket thesis, the Falls and Middletown Township zoning ordinances restrict future uses in all Levitt subdivisions to single-family detached housing. But Bristol Township, which encompasses about half of Levittown PA, has placed about three-quarters of its Levittown subdivisions in an R-3 zone that permits, in addition, "multiple-family dwellings."⁸⁵ But few, if any, appear to have been built.⁸⁶

709, 731. But Steele also found that a proposed multifamily use on a site surrounded by single-family houses did succeed, in whole or part, in 34% of cases. *Id.* at 726.

⁸³ This special zone restricts uses to "single-family detached or senior residence," and requires a minimum lot size of 6k, thereby preventing the subdivision of an existing Levittown lot. TOWN OF HEMPSTEAD, NY, CODE OF ORDINANCES, Article XV §§ 177, 193. . . .

⁸⁴ https://en.wikipedia.org/wiki/Levittown,_Pennsylvania#/media/File:Levittown8.jpg (providing map of pertinent local governments at Levittown Pa).

⁸⁵ BRISTOL TOWNSHIP CODE OF ORDINANCES § 205-27(A)(2).

⁸⁶ A GoogleEarth tour revealed few actual multifamily projects in the Levittown subdivisions in Bristol. . . . Local planning officials declined to respond to e-mail inquiries requesting clarification.

The history of zoning in Euclid, Ohio indicates the rigidity (path-dependence) of both the language in zoning ordinances and boundaries on zoning maps. Euclid's 1922 zoning map, which gave rise to the famous test case, is one of the few from that era available on-line. Euclid lies just east of the City of Cleveland. The City of Euclid is less upscale than every one of the 37 municipalities studied in the three metros. In 2016, the median household income in Euclid was 70% of that of the State of Ohio, and 25% of that of Palo Alto CA. Euclid's population in 2016 was 59% African-American.

The history of Euclid's zoning policies strongly supports the strait-jacket thesis. For a century, Euclid homeowners have prevented the rezoning of established single-family neighborhoods to permit denser housing development. In 1922, the Village of Euclid named its basic single-family zone *U1*, a designation that the 2018 Euclid ordinance continues to retain. In 1922, the Village required in the U1 zone a minimum house-lot of 5k. This figure also remains unaltered.⁸⁷ When Euclid first adopted zoning, the village was largely undeveloped. The suburb's 1922 map placed 52% of its total land area in its basic single-family zone, U1. The neighborhoods so designated lay primarily either in the northern area that borders Lake Erie, or south of Euclid Boulevard. Between 1922 and 2017, the total acreage that Euclid was placing in its U1 zone dropped by one-fourth. These rezonings away from U1 occurred overwhelmingly in neighborhoods where streets had not been installed in 1922. Virtually every developed neighborhood that Euclid had zoned U1 in 1922, it continued to zone U1 a century later. More specifically, Euclid lots comprising a total of 851 acres satisfied all of the following three criteria in 1922: they (1) were zoned U1; (2) lay in a neighborhood where developers had already installed streets; and (3) did not abut a major collector street. In 2017, Euclid was still zoning 99.7% of this acreage U1, that is, single-family only.⁸⁸ Of the acreage zoned U1 in

⁸⁷ CITY OF EUCLID, CODE OF ORDINANCES §1381.01. Euclid has, however, made one major change in its zoning policy during the past century, a change with an exclusionary thrust. The Village's 1922 map placed roughly one-third of its acreage in commercial and industrial zones. The Village's zones then were cumulative, permitting owners of land in those zones to erect residential structures, including apartment buildings. Euclid's present zoning ordinance is noncumulative. *See also supra* note 27.

⁸⁸ . . . Along a collector street, the sole rezoning to permit an apartment buildings involved 6 formerly U1 acres on Lake Shore Boulevard.

1922 that did not satisfy all three criteria, by contrast, only 66.4% remained in an U1 zone in 2017. The Euclid experience indicates that once detached houses have been erected on lots in the interior of a single-family block, the zoning that protects them is nigh impregnable.

The history of Palo Alto's zoning also emphatically supports the strait-jacket assertion.⁸⁹ Three of the highest-priced single-family neighborhoods in Palo Alto are older and more northerly, namely Professorville, Old Palo Alto, and Crescent Park. In 1922, Palo Alto's initial zoning map placed virtually all of these three neighborhoods in a single-family zone, where, with trivial exceptions, they still remain.

The history of zoning in south Palo Alto further demonstrates the city's desire to protect established single-family neighborhoods. Most of the 2700 dwellings that Eichler built in Palo Alto, principally during the 1950s, lie in the lower-priced, southern portion of the city.⁹⁰ Many adhere to a one-story Modernist design, featuring post-and-beam on-slab construction and floor-to-ceiling windows. During the 1950s, the Eichler neighborhoods lay in an R-1 zone, which permitted only single-family detached houses on a house-lot of at least 6k. In 2018, six decades later, Palo Alto continues to zone these neighborhoods R-1.

One of Palo Alto's most notable recent changes in zoning policy reduces the potential population density of south Palo Alto. At the behest of homeowners devoted to preserving Eichler designs and protecting the privacy of their backyards, Palo Alto has entitled homeowners in a single-family neighborhood to vote to limit the heights of houses to a single story.⁹¹ Between 1992 and 2018, Palo Alto approved single-story overlays of this sort in a dozen small areas, mostly Eichler subdivisions in south Palo

⁸⁹ See, e.g., City of Palo Alto, Brief History of the City of Palo Alto Zoning Ordinance, <https://www.cityofpaloalto.org/news/displaynews.asp?NewsID=873&TargetID=239>: "Protection of the City's single family residential neighborhoods was a prime objective of the 1976 Comprehensive Plan and it was agreed that the new ordinance regulations should not differ substantially from the regulations under which many of the neighborhoods were developed."

⁹⁰ See <https://www.eichlerforsale.com/palo-alto-eichlers.php> (a superb source on Eichlers).

⁹¹ See PALO ALTO MUNICIPAL CODE § 18.12.100, Regulations for the Single Story Overlay (S) Combining District. Some other Silicon Valley suburbs with Eichlers have followed suit. See e.g., CITY OF SUNNYVALE MUNICIPAL CODE § 19.26.200.1.

Alto.⁹²

As noted, the intense demand for housing in the Silicon Valley opens up obvious profit opportunities for real estate entrepreneurs. If zoning officials were to concur, a developer could assemble a handful of abutting single-family houses, raze the houses, and replace them with townhouses or mid-rise apartments or condos. But the politics that surround local zoning make this scenario a pipe-dream. Three-quarters of the residentially zoned land in the Plains of Palo Alto is zoned R-1 and already developed. Local politics freezes these neighborhoods, even on lots that abut major collector streets. Historic preservation and neighborhood protection efforts certainly confer benefits, but enhancing housing affordability is not one of them.

Events in 2013 demonstrate the depth in Palo Alto of sentiment against redevelopment near a single-family neighborhood. The nonprofit Palo Alto Housing Corporation had proposed the Maybell project, a partially subsidized multi-family development designed primarily for seniors. The project was proposed for a lot that was already zoned for multifamily use. The lot abutted existing single-family houses on only one side. The Palo Alto city council voted unanimously to approve the Maybell project. This enraged homeowners in the nearby Green Acres and Barron Park neighborhoods, some of them living in vintage Eichlers. Citing concerns about traffic and increased density, they organized Palo Altans to Preserve Neighborhood Zoning. The group gathered thousands of signatures, thereby placing the issue on the ballot. In November 2013, 56% of Palo Altans voted to scotch the Maybell project.⁹³

Palo Alto nonetheless has been less exclusionary than some of its near neighbors, most obviously, the Town of Atherton. In recent decades, Palo Alto in fact has approved numerous proposals for multi-family development. But local politics has required most of these to be sited blocks away from NIMBY homeowners. Most have been located at sites located in a long-established multifamily, planned-community, or industrial zone.⁹⁴ Few

⁹² See map at https://www.scribblemaps.com/maps/view/Single-story_overlay_districts_in_Palo_Alto/5w49nv_ojm

⁹³ <https://www.mercurynews.com/2013/11/05/voters-reject-affordable-senior-housing-project-in-palo-alto/>

⁹⁴ Since 2000, Palo Alto has approved a number of several dense housing developments,

theorists of urban design would regard an industrial area as an ideal site for a multifamily project. But that is where zoning politics in Palo Alto commonly places them. And, as the next section demonstrates, the politics of East Palo Alto, the Silicon Valley's poorest suburb, operate much the same.

D. Zoning in the Bayshore

The average width of the band of land lying between the Bayshore Freeway (U.S. 101) and San Francisco Bay slightly exceeds one mile, but varies greatly. At its southern end, the Bayshore widens to four miles, and there encompasses North San Jose, one of the many neighborhoods of that sprawling city. . . . After 1965, fillings of the Bay essentially stopped, and indeed reversed. In that year the California legislature approved the creation of the San Francisco Bay Conservation and Development Commission. Because credible environmental concerns are likely to stem additional filling, the Bayshore's potential for housing development is limited.

Seven cities control zoning in the Bayshore. The lands in this band tend to be distant from the downtowns of the cities that zone them. Much of the Bayshore has been zoned to permit two uses that few Homevoters would want in their immediate backyards. Particularly numerous are office buildings, commonly occupied by high-tech firms, and typically surrounded by parking lots for employees. Also abundant, perhaps surprisingly, are mobile home parks, renowned for their affordability. Especially between 1955 and 1975, developers created dozens of mobile home facilities in the Silicon Valley. In 2018, these parks offered a total of 7500 spaces, enough to house more than twice the population of Atherton. Almost three-quarters of the Silicon Valley's mobile home spaces lie in the Bayshore, with the balance mostly in the nearby Plains. Sunnyvale, the city with half of the Silicon Valley's mobile homes, has been particularly permissive.

The Bayshore band includes a few developed neighborhoods of single-family houses. These are likely to remain strait-jacketed. A prime example is East Palo Alto, incorporated in 1984, and the only suburb whose lands lie mostly in the Bayshore. Traditionally mostly Black, the population of East Palo Alto has shifted to largely

many of them in what formerly were manufacturing districts (ROLM or GM). . . .

Hispanic. Median household income in East Palo Alto is the lowest in the Silicon Valley. Yet East Palo Alto places 79% of its residentially zoned territory in zones that permit only single-family detached houses. Illustrative is University Village, an established neighborhood of single-family houses on 5k lots in the far north of the city. In Menlo Park, a few blocks to the west, Facebook is planning a 1500-housing-unit development.⁹⁵ In its various official plans, East Palo Alto nonetheless has pledged to protect the existing single-family character of University Village.⁹⁶

Traditionally, the part of North San Jose that lies in the Bayshore band was a sea of mobile home parks and office complexes.⁹⁷ Homevoters were notably absent. As a result, this area has become the site of many of the region's densest housing developments. These typically involve sets of 4-or-5 story buildings, tall enough to look out over the nearby offices and mobile home parks.⁹⁸ Since the early 1990s, twenty or more huge apartment projects have been built in North San Jose. Among the largest were the 2700-unit North Park (2007), the 1750-unit Crescent Village (2013), the 769-unit Epic (2016), and the 1308-unit River View Apartments (2016). A 2012 planning document of the City of San Jose anticipates an additional 32,000 new housing units in North San Jose alone.⁹⁹

The Bayshore thus has served as an escape valve for housing supply in the Silicon Valley. The suburbs that zone the Silicon Valley's Foothills allow multifamily developments in less than 1% of that area. The Plains do include many sites zoned for multi-family use, but 97.8% of them have already been developed in that manner.¹⁰⁰

⁹⁵ <https://www.recode.net/2017/7/7/15935032/facebook-mark-zuckerberg-new-campus-expansion-willow-menlo-park>

⁹⁶ See, e.g., EAST PALO ALTO, RAVENSWOOD/FOUR CORNERS TOD PLAN 48 (Feb. 22, 2013): “[N]o land use changes are proposed in the University Village neighborhood”; CITY OF EAST PALO ALTO GENERAL PLAN, VISTA 2035, at 4-22: “Goal LU-5. Preserve the character of existing single-family neighborhoods.”

⁹⁷ More precisely, the area lying north of Montague Expressway.

⁹⁸ Building code officials have recently approved a new and less costly technology for buildings of this height. The newly-permitted structures have a deck of concrete for the first floor or two, and wood bearing-walls above. See <https://urbanland.uli.org/economy-markets-trends/increased-use-wood-reduced-parking-may-reduce-multifamily-construction-costs/>

⁹⁹ http://planning.sanjoseca.gov/planning/nsj/docs/NSJ_Policy_Feb2012rev.pdf, p.10.

¹⁰⁰ See *supra* text accompanying note 68.

Absent the apartment developments in North San Jose and elsewhere in the Bayshore, housing prices in the Silicon Valley would be even more astronomic. But there is a downside. Dense housing developments are better located near the urban cores of cities, not in remote industrial areas.

The level of opposition to multifamily development in the Silicon Valley, as it happens, pales in comparison to that in some other metropolitan areas.

III. ZONING IN GREATER NEW HAVEN: LAND OF LARGE LOTS

The study now turns to the zoning policies of the fourteen suburbs that surround the City of New Haven, Connecticut, our Frostbelt representative. New Haven is a port city on Long Island Sound, 65 miles northeast of Manhattan.¹⁰¹ The author selected this metro because, frankly, it lay near at hand. This proximity facilitated research into suburbs' zoning histories, information rarely available online. Greater New Haven also is particularly well-suited to the introduction of two topics that inevitably affect housing supply: the provision of utility services to residential areas, and the setting aside of land for open space.

New Haven's suburbs have long been far more exclusionary than most of their counterparts in the Silicon Valley and the northwest sector of Greater Austin.¹⁰² Zoning policies of course vary within the Frostbelt, and there is no claim here that the practices of New Haven's suburbs are typical. Greater New Haven probably is, however, representative of Connecticut. In 2016, median-household income in Fairfield County, the part of the state closest to New York City, exceeded that of New Haven County by 38%. Fairfield County suburbs likely are even more exclusionary.¹⁰³ And a Brookings study conducted in 2006 asserts the suburbs of the Hartford CT metro are far more

¹⁰¹ All 14 towns belong to South Central Regional Council of Governments (<http://scrcog.org/>). In each of the three metros, the downtown of the region's principal city was excluded from the data. For consistency, this required the non-inclusion of the City of New Haven itself.

¹⁰² Ganong & Shoag, *supra* note 15, at 89, assert that, "In 1965, land use was permissive everywhere" in the United States. The findings for Greater New Haven suggest otherwise.

¹⁰³ Exclusionary practices are positively correlated with the presence of wealthy households. *See* Glaeser & Gyourko, *supra* note 14, at 19.

exclusionary than those of New Haven.¹⁰⁴ Application of the metrics offered in Part I would more conclusively confirm variations in land use policies both within Connecticut and throughout the Frostbelt.

A. An Introduction to Greater New Haven

Colonists first arrived in New Haven in 1638, making it handily the oldest of the three urban metros examined. Yale University was founded in 1701, almost two centuries prior the 1880s, the decade that witnessed the opening of campuses at Stanford University and the University of Texas at Austin. New Haven's suburbs also are relatively long-settled. In 1880, the City of New Haven's fourteen suburbs had a combined population of 48,000. That figure, in that year, exceeded the combined populations of Santa Clara and San Mateo Counties in California, and of Travis and Williamson Counties in Texas.¹⁰⁵

During the nineteenth century, both New Haven and Connecticut were at the forefront of U.S. technology, particularly in fabrication.¹⁰⁶ Eli Whitney, a Yale graduate, pioneered the use of replaceable-parts manufacturing at a site in Hamden, just upstream from the City of New Haven. Among other accomplishments, in 1878 New Haven became the site of the world's first telephone switchboard. Connecticut has long been one of the wealthiest states, and, up until the 1970s, was a magnet for upwardly mobile workers.¹⁰⁷ No longer. Over the course of the twentieth century, the Greater New Haven economy shifted away from manufacturing, and toward the provision of higher education and health services.¹⁰⁸ In 2016, median household income in New Haven County was \$62,700. This exceeded the U.S. figure by 13%, but was only about half the figure for the Silicon Valley, and slightly trailed the figure for Travis County.

¹⁰⁴ Pendall, Puentes & Martin, *supra* note 25, *New Haven CT NECMA*, at 1.

¹⁰⁵ The exact figures for 1880: New Haven suburbs, 47,934; the two California counties, 43,708; the two Texas counties, 42,183.

¹⁰⁶ See Robert Higgs, *Urbanization and Inventiveness in the United States, 1870–1920*, in *THE NEW URBAN HISTORY* 247, 254-57 (Leo F. Schnore & Eric E. Lampard eds., 1975).

¹⁰⁷ Ganong & Shoag, *supra* note 15, at 70.

¹⁰⁸ The share of New Haven County jobs in manufacturing fell from 33.1% in 1970 to 8.0% in 2016. Alan Berube & Cecile Murray, *America's Older Industrial Cities Are Key to an Inclusive Economy* (Brookings post).

While demand to live in both the Silicon Valley and Greater Austin currently is intense, it is tepid in Greater New Haven. New Haven's suburbs almost doubled in population during the 1950s and 1960s. During that era, the City of New Haven's nationally prominent urban renewal program helped spur suburbanization, particularly of White households.¹⁰⁹ Between 1970 and 2016, by contrast, the annual growth of the populations of New Haven's fourteen suburbs plummeted to less than 5% of what their annual population increment had been between 1950 and 1970. House prices reflect this falloff in demand. In 2017, the median price of a house in Greater New Haven was \$221,000, compared to \$296,000 in Greater Austin and \$1,180,000 in the San Jose metro.¹¹⁰

Why is demand to live in the New Haven area, and many other parts of the Frostbelt, currently so weak? Other factors complement the issues that this Article addresses. A prime candidate is climate.¹¹¹ Twenty-five thousand years ago, the glaciers that eventually formed the terminal moraine that became Long Island covered the New Haven region to a depth of several thousand feet. New Haven's mean high temperature in January is 38° F, more than twenty degrees colder than the comparable figures for Palo Alto and Austin. Austin's summers, of course, are unpleasantly hot, with an average high of 96° in August. Since the advent of air-conditioning, however, many migrating households might rate a New Haven winter worse than an Austin summer. Another growth deterrent is the cost of electricity in Connecticut, tops in the continental United States.¹¹² Some commentators also assert, more controversially, that Connecticut's recent political choices have made its business climate relatively off-putting.¹¹³

More pertinent for current purposes is Connecticut's arguably dysfunctional

¹⁰⁹ DOUGLAS W. RAE, *CITY: URBANISM AND ITS END* 259, fig. 8.1 (2005).

¹¹⁰ National Association of Realtors, <https://www.nar.realtor/sites/default/files/documents/metro-home-prices-q1-2018-single-family-2018-05-14.pdf>

¹¹¹ *But cf.* Edward L. Glaeser & Kristina Tobio, *The Rise of the Sunbelt* (Taubman Center Policy Briefs, PB-2007-5, May 2007) (attributing growth of the Sunbelt mostly to the region's high level of housing production, not its environmental amenities).

¹¹² <https://www.eia.gov/electricity/state/>

¹¹³ Aaron M. Renn, *Why Connecticut Lost GE*, CITY JOURNAL, January 14, 2016.

system of local government. Connecticut, unlike California and Texas, has no unincorporated areas in which new municipalities may be formed.¹¹⁴ All of Connecticut instead is entirely subdivided into 169 towns that carry out functions, such as election supervision and land recording, that many states assign to counties. Since 1921, the period when zoning took hold, the boundaries of all fourteen New Haven suburbs have remained the same. By contrast, of the Silicon Valley's 15 current suburbs, only 5 existed in 1916, and, of Greater Northwest Austin's 8, only 2.

Connecticut's decision a century ago to decentralize zoning power to its extant towns has significantly fostered exclusionary practices in the state.¹¹⁵ For a number of reasons, the state's suburban towns proved to be natural institutional vessels for the practice of exclusionary zoning. A small municipality mostly populated by Homevoters has traditionally been thought to be more likely to pursue exclusion than a larger local government with a more pluralistic politics.¹¹⁶ The venerability of New Haven's 14 suburbs also likely intensified local passions to exercise home rule, including the practice of exclusionary zoning. Connecticut's structuring of its local government thus contributed to the state's current plight: weak and poor central cities surrounded by exclusionary suburbs.

The zoning practices highlighted in this study may themselves have contributed to Connecticut's lack of appeal. New Haven's suburbs, like most others in Connecticut, offer few single-family neighborhoods where a home purchaser can find *both* a well-rated system of public schools *and* lot sizes that enable walkability. Many Millennials seem to prefer neighborhoods that would satisfy both criteria.¹¹⁷ As a result, Connecticut may be suffering in the national competition to attract migrants.

Connecticut's local institutions are distinctive in other pertinent respects. In most towns, the members of the zoning commission are elected, not appointed, as in other

¹¹⁴ A few states, Massachusetts among them, are similar to Connecticut in this respect.

¹¹⁵ See CONN. GEN. STAT §§ 8-1 to -13a.

¹¹⁶ See Robert C. Ellickson, *Suburban Growth Controls: An Economic and Legal Analysis*, 86 YALE L.J. 385, 404-09 (1977). This view increasingly is challenged. See, e.g., Been et al., *supra* note 8; David Schleicher, *City Unplanning*, 122 YALE L.J. 1670, 1698-99 (2013).

¹¹⁷ Hyojung Lee, *Are Millennials Coming to Town? Residential Location Choice of Young Adults*, URB. AFF. REV. 1 (2018).

states. This selection system likely makes Connecticut zoning commission members even more responsive to Homevoters, and may increase judicial deference to zoning decisions. Also noteworthy in the land-use context are two particular Connecticut statutes. Since 1972, Connecticut has required each town to create another pertinent regulatory body, an Inland Wetlands Commission.¹¹⁸ The retreat of the glaciers after the end of the Ice Age created an unusual number of these sorts of landforms.¹¹⁹ And, in 1990, Connecticut enacted an anti-snob zoning statute that directly addresses the issues discussed in this Article. Its structure and effects are discussed below.

B. Zoning in New Haven's Five Most Exclusionary Suburbs

If the fourteen New Haven suburbs were to be ranked by median household income, five would come out on top. These five are, by this Article's metrics, also Greater New Haven's most exclusionary. Four—Bethany, Madison, Orange, and Woodbridge—zone at least 98% of their residentially zoned land solely for single-family dwellings on lots of at least 1 acre. In Guilford, the fifth, that figure is 93%. In fact, these five towns require a 2-acre minimum house-lot—roughly ten times the area of an Eichler 8k lot—on 55% of their residentially zoned land. These five towns average 28 square miles in area. This is six times the size of Atherton CA, and eight times that of West Lake Hills TX, two of their exclusionary counterparts in the other metros. None of the zoning maps of these five New Haven suburbs depict a single-family zone where an 8k lot would be permitted as of right. Guilford does allow 10k lots, but in just 0.7% of its residentially zoned area. Bethany did not adopt zoning until 1952, when it specified that the only residential uses permitted throughout the town would be single-family detached houses. Of the five, the zoning maps only of Guilford and Woodbridge include multi-family zones, which take up respectively 0.1% and 0.5% of their residentially zoned territory.

New Haven's suburbs all belong to a council of governments that, among other

¹¹⁸ Inland Wetlands and Watercourses Act of 1972, CONN. GEN. STAT. §§ 22a-36 to -45.

¹¹⁹ Kenneth J. Metzler & Ralph W. Tiner, *Wetlands of Connecticut* 23-27 (1992), available at http://www.ct.gov/deep/lib/deep/water_inland/wetlands/wetlands_of_ct.pdf The SCRCOG 2010_Regional_Build_Out_Analysis.pdf provides, in its appendixes, maps that show, for each New Haven suburb, areas that either are situated in a wetland or floodplain, or have a slope of more than 15%.

activities, undertakes research. In 2010, the council hired an engineering firm to conduct a “build out” analysis.¹²⁰ The council asked the consultant, among other tasks, to determine how many housing units could be built, under existing regulations, on vacant and agricultural lands in each of the area’s towns. For these five most exclusionary suburbs combined, the consultant’s report estimated the number of possible new housing units to be 3,147.¹²¹ In these towns, this works out to roughly about 1 dwelling unit per 30 acres of the residentially zoned land.

1. The Effect of Water Supply on Zoning Policy

Systems for providing utility services, a topic not broached in the analysis of the Silicon Valley, profoundly shape patterns of urban growth. Of the various utility services, water supply and the disposal of waste water typically have the greatest impact on residential development.

a. Technological alternatives

In the urban areas of most states, a public utilities commission assigns a utility organization, public or private, to supply household water and dispose of wastewater. In all three of the metros studied, these organizations are present and influential. Many of their technologies are familiar. To provide potable water, a water utility typically maintains reservoirs. From these it delivers water to residences, commonly after filtration or other treatment, through a network of underground pipes. A separate utility organization typically maintains the network of underground sanitary sewers through which wastewater is removed from residences. A wastewater utility normally operates a treatment plant to remove contaminants prior to the discharge of effluents into a waterway. Some suburban neighborhoods, such as much of Orange CT, are served with public water, but lack public sanitary sewers.¹²²

¹²⁰ Milone & MacBroom, *Regional Build-Out Analysis* (June 2010) (prepared for SCRCOG). If land allocation were allowed to respond to market forces, no urban area would ever be “built-out.”

¹²¹ The authors of the study rightly noted that these calculations were based on assumptions that zoning regulations would not change and that no additional lands would be set aside as open space. See *id.* at 2.

¹²² Orange’s sanitary sewers lie in the portion of town along the Boston Post Road, and south thereof.

Networks of utility pipes are not the only technological option. In Greater New Haven especially, many suburbanites rely, for both water supply and wastewater disposal, on a household-scale system.¹²³ New Haven is the wettest of the three metros, with annual rainfall of 48 inches, an amount normally sufficient to replenish aquifers.¹²⁴ A house on a spacious suburban lot in the New Haven area commonly obtains its water from an on-site well into which an electric pump has been submersed. To dispose of wastewater, the house also typically employs an on-site facility. Most commonly, house drainpipes empty into a septic tank, from which waste fluids eventually flow into a leaching field that distributes them into the soil of the house lot. Especially when a lot is small, the leaching process may contaminate the aquifers from which the host house, or nearby houses, draw well water.¹²⁵ Suburban officials who anticipate that homeowners will use a household-scale system commonly invoke this risk to justify large minimum house-lot requirements.

But there is a third, much less familiar, technological option: a “decentralized,” or “community,” water or sanitary sewer system.¹²⁶ These operate at an intermediate geographic scale that is larger than that of a house-based system, but smaller than that of a typical public utility. The designer of a decentralized utility system may be able to place its water wells at a safe distance from the discharge pipes for waste water. A properly designed decentralized utility system thus potentially undercuts the usual public health rationale for large-lot zoning.

To encourage the development of these decentralized utility systems, a suburb’s zoning ordinance might automatically relax a minimum-house-lot requirement where a subdivider had provided a sufficiently safe decentralized alternative. None of the exclusionary zoning ordinances in Greater New Haven and the Silicon Valley, however,

¹²³ Wells and septic tanks serve some houses in, for example, Los Altos Hills CA, Woodside CA, and West Lake Hills TX.

¹²⁴ This compares to 34 inches in Austin, and 15 inches in the Silicon Valley.

¹²⁵ Glaeser & Ward, *supra* note 28, at 269, report that Greater Boston suburbs commonly stiffen Massachusetts’s standards for septic tank performance.

¹²⁶ U.S. Environmental Protection Agency, *Decentralized Wastewater Treatment Systems: A Program Strategy* (2004); see also *Landmark Development Group, LLC v. East Lyme Zoning Comm’n*, Conn. Sup. Ct., 2011 WL 5842576 (lengthy discussion of community wells and community septic tanks).

offers this possibility. Pro-growth Texas, by contrast, is more flexible. The Austin suburb of Lakeway reduces the required lot area in its basic single-family zone from one acre to 15k when a lot will be served by an “organized sewer.” Zoning provisions of this nature would stimulate technological progress in the design of decentralized systems.

Zoning officials, especially in Greater New Haven, have been eager to protect from development the natural watersheds that feed reservoirs. In a rural area, this may well be justified. But when applied to watersheds that are close to the urban core, this policy reduces population density, and thus is distinctly anti-urban. The alternative to using large-lot zoning to protect a watershed is a system of post-reservoir water purification.

The activities of the Southern Connecticut Regional Water Authority, a public entity that provides water to 10 of New Haven’s 14 suburbs, illustrate both alternatives. In 2015, the Authority owned 20,060 acres of land in the 14 suburbs, roughly 9% of their total acreage.¹²⁷ In the area around Lake Galliard in North Branford, the largest of the Authority’s reservoirs, the dedication of these lands to watershed protection likely is cost-justified. In neighborhoods much closer to the City of New Haven, however, a post-reservoir method of water purification likely would make more sense. Since 1860, Lake Whitney, a dammed reservoir that lies just north of New Haven in the city in Hamden, has been the source of most of the City of New Haven’s water supply. In 2018, hundreds of Hamden dwelling units lay within one block of the shores of Lake Whitney. Lake Whitney tap-water nonetheless is potable. The Authority has achieved that result by repeatedly modernizing, most recently in 2005, its filtration facility downstream from the Lake Whitney. At this close-to-downtown location, opting for a post-reservoir filtration was wiser than razing hundreds of dwellings in Hamden.

b. Exclusion, sewer-style, in New Haven’s high-income suburbs

The decision of a town not to provide sanitary sewers can be the cornerstone of its exclusionary land use policy. The absence of sewers commonly gives a town legal cover. Connecticut courts, for example, have accepted the absence of a sanitary sewer as a

¹²⁷ <https://www.rwater.com/about-us/who-we-are>

justification for zoning that requires a large house-lot.¹²⁸ Three of New Haven's five most exclusionary suburbs—Bethany, Guilford, and Madison—lack sanitary sewers altogether. Woodbridge, one of the remaining two towns, provides them in about 5% of its territory, and Orange, in about 10%.

A town's decision not to sewer of course may be cost-justified. There may be scant demand for dense housing, and hydrological conditions may favor use of wells and septic tanks. These conditions largely prevail in Bethany and Madison, suburbs remote from the City of New Haven. Three of the suburbs that have chosen to be mostly sewerless, however—Guilford, Orange, and Woodbridge—each contain neighborhoods within an easy commute to downtown New Haven. The absence of sanitary sewers in these neighborhoods reduces the area's agglomeration efficiencies.

2. The Connecticut Statute Favoring Projects that Include Affordable Dwelling Units*

Both Connecticut and California have enacted complex statutes, different in detail, to counter exclusionary zoning.¹²⁹ Texas, where the problem is not as pressing, has

¹²⁸ See, e.g., *De Mars v. Zoning Comm'n of Town of Bolton*, 115 A.2d 653, 654 (Conn. 1955) (rebuffing a claim that town's 40k minimum lot requirement for a house was an unreasonable exercise of the police power); *Chucta v. Planning & Zoning Comm'n of Town of Seymour*, 225 A.2d 822, 825 (Conn. 1967). Courts in other states have similarly tended to defer to local decisions on minimum lot sizes. The leading decision is *Simon v. Town of Needham*, 42 N.E.2d 516 (Mass. 1942). Boudreaux, *supra* note 16, at 20-27, reviews the case law.

¹²⁹ Two California statutes are particularly pertinent. The first, initially enacted in 1979, requires a local government to provide a density bonus to a developer who has proposed a qualifying mixed-income project. CAL. GOV'T CODE § 65915. In response to this enactment, a strategic suburb might reduce the densities it initially allowed, a ploy that the statute does not prohibit. Second, California has developed, over the decades, a system for calculating each locality's fair share of regional housing needs. Each locality must prepare, and submit for state approval, a housing element in its general plan that indicates how it will attain its objectives. CAL. GOV'T CODE § 65583(c). During their first several decades, these fair-share goals proved to be largely toothless. See, e.g., Ben Field, *Why Our Fair Share Housing Laws Fail*, 34 SANTA CLARA L. REV. 35 (1993). But California later strengthened incentives for localities to comply. In 2012, Facebook was able to invoke the fair-share statute when pressuring Menlo Park to approve the development of 1,975 new housing units, mostly in the Bayshore, with more than half set aside for low- and moderate-income households. Jessie Agatstein, *The Suburbs' Fair Share: How California's Housing Element Law (and Facebook) Can Set a Housing Production Floor*, 44 REAL EST. L.J. 219, 242 (2015). In 2017, the California legislature approved SB 35, which aims to ease approvals for mixed-income projects in areas already zoned for multifamily use. https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB35 The impact

done less.¹³⁰ . . .

3. Open Space Set-Asides

Future historians of land policies in the United States are likely to stress two massive changes that occurred during the twentieth century. The first half of the century saw, with the introduction of zoning, the seeds of a major increase in municipal regulation of the use of private land. The second trend has been less obvious. Partly spurred by the environmental movement that blossomed around 1970, governments and other institutions have started to protect an ever increasing fraction of land from development of any kind. Greater New Haven has led the three metros in this pursuit, with the Silicon Valley a close second.¹³¹ Connecticut had no system of state parks prior to 1913. In 1997, by contrast, its legislature announced the goal of acquiring, or permanently protecting, 21% of the state's land as open space by the year 2023.¹³²

In many contexts, the platitudes about the merits of open space are convincing. Especially in a rural area, conservation can provide habitat for wildlife, preserve endangered species, protect watersheds that feed reservoirs, and offer opportunities for outdoor recreation. Residents of an urban area also unquestionably benefit from parks

of this legislation is as yet uncertain. See <https://www.mercurynews.com/2018/09/17/battle-heats-up-over-trailblazing-silicon-valley-housing-development/> (describing a battle in Cupertino over a proposed project that would include 2,402 housing units).

¹³⁰ *But cf.* the Texas Homestead Protection District and Reinvestment Zone Act, TEX. LOCAL GOV'T CODE § 373A.001ff, adopted in 2005, which authorizes the creation of tax-increment-finance districts to raise revenue to subsidize mixed-income housing projects.

¹³¹ In the Silicon Valley, a major institutional force, since its founding in 1972, has been the Midpeninsula Regional Open Space District. In 2018, the District had 26 open-space reserves, totaling 100 square miles. Eleven of these lay within the territory that this Article defines as the Silicon Valley, mostly in the Mountains. See map at https://www.openspace.org/sites/default/files/district_map.pdf. Municipal acquisitions in the region include the City of Palo Alto's purchase of Foothill Park, discussed *supra* note 59 and accompanying text.

The Greater Austin region has three active land trusts, the first created in 1986. These are organized regionally, not, as in the New Haven area, suburb by suburb. <https://www.findalandtrust.org/counties/48453> The City of Austin also has undertaken land acquisitions in its northwestern sector, primarily to add to the Balcones Canyonlands Preserve. <http://www.austintexas.gov/bcp>

¹³² CONN. GEN. STAT. § 23-8. The legislation contemplates that the state would own about half of this acreage, with the balance protected mostly by local governments, land trusts, and water companies.

and other open spaces, welcome forms of relief from asphalt and concrete. During the mid-nineteenth century, civic leaders in Manhattan had the wisdom to create Central Park, which provided needed respite from the relentless northward march of the grid of streets that the Commissioners Plan of 1811 had envisioned.¹³³

The provision of open space in an urban area, however, is not invariably benign. The agglomeration benefits of urban living spring from population density. Open spaces invariably reduce density. From a utilitarian perspective, just as there can be too little open space, there also can be too much. The value that an open space adds may be less than the sum of the forgone benefits of development (the opportunity costs), and the loss of agglomeration benefits. New York City's leaders would have been foolhardy to have set aside as a park half of Manhattan, for example, the entire area north of 59th Street, Central Park's southern boundary.

Guilford, one of New Haven's five most exclusionary suburbs and hardly an outlier with regard to these issues, illustrates the panoply of institutions that have contributed to the open-space movement. Guilford has a land area of 47 square miles, making it handily the largest of New Haven's suburbs. Because it lies east of the City of New Haven—and thus further from New York City—development pressures have been less intense. Guilford's topography has somewhat accentuated the penchant of its residents for open space. Much of the town's coastal area along Long Island Sound consists of tidal wetlands, and its upland regions contain several lakes. Most of the terrain in the northern half of Guilford is rugged, and beyond an easy commute to downtown New Haven. Guilford's policies regarding its southern half, bisected by I-95, more greatly affect the welfare of metropolitan New Haven.

In 1918, the fraction of Guilford's land area set aside as open space was conceivably as low as 2%, and certainly no more than 5%.¹³⁴ By 2018, this percentage

¹³³ On the creation of Central Park, see *THE GREATEST GRID: THE MASTER PLAN OF MANHATTAN 1811–2011*, at 118–21 (Hilary Ballon ed., 2012).

¹³⁴ A variety of facts back this estimate. Not until the 1920s did the State of Connecticut begin acquisitions for Cockaponset State Forest, the state's main holdings in Guilford. https://en.wikipedia.org/wiki/Cockaponset_State_Forest And not until the 1920s did the New Haven Water Company, the predecessor of SCRWA, first began acquiring land for its principal

had risen to 35%, primarily on account of changes in the northern portion of the town. In 2018, the owners of the most open-space land in Guilford were the Southern Connecticut Regional Water Authority, with 12% of town acreage, and the nonprofit Guilford Land Conservation Trust, with 9%. The next highest owners were the town itself (7%), and the State of Connecticut (4%).

As Guilford illustrates, the flowering of open-space sentiment has prompted actions from governments at all levels. Among the government inducements have been tax subsidies to nonprofit land trusts. Since 1980, the federal income tax code has had a special provision governing the deductibility of the donation of a perpetual conservation easement to a land trust.¹³⁵ The state of Connecticut has provided additional tax inducements.¹³⁶ Of New Haven's five most exclusionary suburbs, Woodbridge residents formed the first land trust, in 1928. By 1991, all 14 New Haven suburbs had one.

Exclusionary zoning practices, by reducing the market value of undeveloped land, enhance set asides for open space. As noted, the Town of Guilford has refused to install sanitary sewers, and it requires a 4-acre minimum house-lot in much of the town. These policies abet landowners' willingness to forgo development.

In at least five instances since 1997, New Haven's suburbs have acquired a undeveloped tract, on the order of 150 acres in area, expressly to prevent housing development.¹³⁷ Although the details of these transfers vary, the following script generally applies.¹³⁸ The town employs various exclusionary practices to depress the

reservoir in nearby North Branford. https://en.wikipedia.org/wiki/Lake_Gaillard. The Guilford land trust was formed in 1963. Many of the Town of Guilford's own open-space acquisitions are recent, such as the 588-acre Timberlands Preserve, acquired in 1975.

¹³⁵ 26 U.S.C. § 170(h) (2000).

¹³⁶ CONN. GEN. STAT. § 12-217dd (providing up to a 50 percent tax *credit* to a donor owing state corporation business taxes); . . .

¹³⁷ On this pattern of conduct, see Stephen Schmidt & Kurt Paulsen, *Is Open-Space Preservation a Form of Exclusionary Zoning? The Evolution of Municipal Open-Space Policies in New Jersey*, 45 URB. AFF. REV. 92 (2009). See also Terry J. Tondro, *Connecticut's Affordable Housing Appeals Statute: After Ten Years of Hope, Why Only Middling Results?* 23 W. NEW ENG. L. REV. 115, 159 (2001) (asserting that five Connecticut towns had acquired lands to squelch proposed § 8-30g projects).

¹³⁸ The other four instances: Woodbridge voluntarily purchased the Eldersie Preserve (198 acres) in 2000, and the Country of Club of Woodbridge (150 acres) in 2009. Branford and

market value of the undeveloped tract. The landowner then threatens to sell the tract to a housing developer, perhaps one who will invoke the Connecticut Appeals Act as leverage. Bargaining between town and landowner ensues. Eventually, to prevent development, the town acquires the tract, either by voluntary transfer or through the town's exercise of its power of eminent domain.

The Town of Orange, true to its exclusionary traditions, carried out the most memorable of these five purchases. Hubbell, Inc. owned a 376-acre tract, the largest undeveloped parcel remaining in Orange. The town had successively raised the minimum required house-lot for this property, starting with ½-acre in 1938, ultimately increased in 2004 to 1-½-acres. In 2010, Hubbell proposed to develop 225 houses, some of them subsidized, on the 376 acres. Bargaining ensued. In 2011, Hubbell agreed to sell the tract to the town for \$7.2 million. The town's leaders asked voters to ratify this purchase in a referendum. Prior to the vote, the town's top elected official advised that the purchase would serve the fiscal interests of most Orange households. He predicted that a typical homeowner's annual costs of financing the purchase of the Hubbell site would be far less than the costs of financing services to the new residents, especially school children, who would live there were it to be developed.¹³⁹ In July 2011, Orange voters turned out in massive numbers, and 83% approved the proposed purchase.¹⁴⁰

Connecticut's system of school finance had helped clinch this outcome. Several Connecticut Supreme Court decisions, the first in 1977, had compelled the Connecticut legislature to tilt formulas for state aid to schools more sharply in favor of poor jurisdictions, and against wealthy suburbs such as Orange.¹⁴¹ It is unlikely that many

North Haven used eminent domain. *See* *Town of Branford v. Santa Barbara*, 988 A.2d 209 (Conn. 2010) (involving 77 acres); *Peter Rock Associates v. Town of North Haven* 756 A.2d 335 (Conn Super Ct. 1998), *aff'd*, 756 A.2d 290 (Conn. App. 2000) (involving 182 acres acquired to expand adjacent park).

¹³⁹ A typical homeowner's share of the annual costs of purchasing the Hubbell site was estimated to be \$100. The share for service costs to the site, if developed, was estimated to be \$500 per annum. Brian McCready, *Orange Residents Overwhelmingly OK \$7.1M Hubbell Land Purchase*, NEW HAVEN REGISTER, July 12, 2011.

¹⁴⁰ Bob Brown, *Voters Say YES to \$7.2 Million Hubbell Purchase*, ORANGE PATCH, July 13, 2011, available at <http://patch.com/connecticut/orange/hubbell-matter-passes>.

¹⁴¹ *See* Zachary D. Liscow, *The Efficiency of Equity in Local Government Finance*, 92

Orange voters were eager to add to public open-space as such. They mostly dwell in houses on lots of 0.5-to-1.0 acres, and the town already had several spacious hiking areas. Orange voters instead supported the purchase of the Hubbell tract mainly to avoid fiscal burdens, and, for some, the prospective influx of less prosperous neighbors.

C. Zoning in New Haven's Middle-Income Suburbs: Branford Turns Green

As Part I demonstrated, all New Haven suburbs, not just the five most exclusionary, have a penchant for both large-lot zoning and limiting as-of-right multifamily dwellings. An important empirical question is whether, over time, these tendencies have become more pronounced. In general, they have. This section invokes the history of Branford, one of New Haven's middle-income suburbs and formerly an important outlet for development pressure, to illustrate the tightening of land use regulations.

Branford lies just west of Guilford on Long Island Sound. Branford's Green is six miles east of downtown New Haven. Between 1950 and 1980, when the town's policies were generally pro-development, its population almost tripled. Interstate 95, as the highway is now called, runs from Maine to Florida, and directly connects Branford to downtown New Haven. The opening of I-95 in 1958 helped stimulate Branford's growth.

Daniel Cosgrove, a well-connected construction contractor and political boss, dominated Branford politics during the 1960s and 1970s.¹⁴² Cosgrove headed the local Democratic committee and, more pertinently, Branford's sewer authority. His policies helped fuel a condo boom. By 1989, the town had granted permits for 47 condominium complexes with a total of 3,253 units, currently about one quarter of the town's housing stock.¹⁴³ In the New Haven region, Cosgrove's tolerance of dense developments earned Branford the nickname "condo city."¹⁴⁴ To avoid riling nearby homeowners, condo developers commonly placed a wreath of open space around their complexes, limiting

N.Y.U. L. REV. 1828 (2017), and, e.g., *Horton v. Meskill*, 376 A.2d 359 (Conn. 1977).

¹⁴² Marcia Chambers, *The Boss of Branford*, BRANFORD EAGLE, Oct 6, 2006.

¹⁴³ Eric Schmitt, *Connecticut's Condo Capital Deals with Boom Gone Bust*, N.Y. TIMES, Sep. 3, 1989. In 2005, Branford had 3700 condo units in 50 complexes. <https://www.nytimes.com/2005/08/26/realestate/weekender-branford-conn.html>

¹⁴⁴ Andree Brooks, *Town Reversing Stand on Condos*, N.Y. TIMES, June 20, 1982.

town-wide walkability. In part because condo-living is relatively inexpensive, in 2016, Branford's median family income ranked 11th highest among New Haven's 14 suburbs.

By the 1980s, Branford's politics had begun to green. Residents had formed the Branford Land Trust in 1967, and began using it as a vehicle for acquiring open space.¹⁴⁵ In the early 1980s, a grass-roots group, the Beacon Hill Preservation Society, came to life and succeeded in scotching a proposal for condo development near one of Branford's traprock ridges. During the 1980s, the Branford Land Trust witnessed an "explosion of energy" as its membership and land holdings both began to climb.¹⁴⁶ Cosgrove, a skeptic of the value of preserving wetlands, had become suspiciously wealthy during the 1960s and 1970s. Cosgrove suffered a key defeat in 1983 when Judy Gott, who had run on a platform of slowing the development of high-density condominiums, was elected Branford's First Selectwoman. In 1987, Gott pushed through a zoning amendment that reduced the maximum density of future multi-family developments from 18 units to a 6 units an acre, a limitation that Branford continues to retain.¹⁴⁷

The effect of the greening of Branford's politics on housing production has been profound. During Branford's 1960s and 1970s phase as condo city, the town had approved 160 units of condominium development per year. During the period 1997-2016, approvals of this sort had fallen by 95%, to 8 per year.¹⁴⁸ Since 1990, when the formerly approved condo projects had been built out, Branford's population has been flat. Many Branford residents now are skeptical of development of any kind. In 2017, after a long battle, opponents caused Costco to scrap plans to erect a store near one of the Branford exits off I-95.¹⁴⁹

Branford's political turn against development is analogous to Palo Alto's, although a decade or two later. A valuable counterweight to the main narrative of this

¹⁴⁵ See <http://branfordlandtrust.org/wp-content/uploads/2014/01/OpenSpace-Timeline.pdf>

¹⁴⁶ Christin E. Wanerka, *The Branford Land Trust: History*, in BRANFORD 350TH CELEBRATION 27 (available in Branford Town Library).

¹⁴⁷ See Schmitt, *supra* note 143; TOWN OF BRANFORD, ZONING ORDINANCE § 3.4.

¹⁴⁸ According to the State of Connecticut's Department of Housing, between 1997 and 2016, Branford granted permits for a total of 153 housing units in structures with 5 or more units.

¹⁴⁹ <https://www.nhregister.com/business/article/Costco-gives-up-on-Branford-plans-11313169.php>

Article would be the history of a town where YIMBYs (Yes In My Backyard advocates) had taken over from NIMBYs. But the zoning histories of none of the 45 localities included in this study fit that scenario.

D. Zoning in New Haven's Blue-Collar Suburbs

East Haven, Meriden, and West Haven can be called, to invoke an arguably anachronistic label, New Haven's blue-collar suburbs. In 2013, the median household income in each, although about 50% higher than that of the City of New Haven itself, was lower than that of the other 11 suburbs. Yet even these three suburbs engage in a form of exclusionary zoning, one that their counterparts in the other two metros shun.

West Haven and East Haven, as their names imply, immediately adjoin the City of New Haven along Long Island Sound. In area, these two towns are the smallest of New Haven's suburbs. West Haven came into existence in 1921 when it was carved out of the larger Town of Orange. At that time, downtown West Haven, which had longstanding streetcar links to New Haven, already was relatively dense. In 2013, 21% of West Haven's population was African-American, the highest percentage of any New Haven suburb. East Haven, by contrast, is only 3% African-American. Its percentage of Italian-Americans is 43%, the highest in the region.¹⁵⁰ Meriden's downtown lies in a flat portion of Connecticut's Central Lowlands, about halfway between the cities of New Haven and Hartford. Meriden developed as an industrial center during the late nineteenth century. By 1900, it had a population of 29,000, at that time 42% of the combined population of New Haven's 14 suburbs. In 2013, 29% of Meriden's population was Hispanic, the highest of any New Haven suburb.

The most striking aspect of these three blue-collar towns' zoning policies is their resistance to allowing ordinarily-sized house-lots in single-family neighborhoods. The zoning ordinances of municipalities in Greater Austin accurately refer to a 10k lot as a "large lot."¹⁵¹ These three blue-collar New Haven suburbs, however, forbid house-lots as small as 10k on 72% of their residentially zoned territory. West Haven's single-family

¹⁵⁰ David Holahan, *Greater New Haven's 'Most Italian' Roots Run Deep*, HARTFORD COURANT, April 21, 2016.

¹⁵¹ See *supra* note 41 and accompanying text.

zones require a median of 16k, twice the area of a prototypical Eichler lot in south Palo Alto. East Haven's median is 20k, and Meriden's, 11.25k. The motivations of these non-fancy Connecticut towns to outlaw relatively dense single-family neighborhoods remain obscure.¹⁵²

Nonetheless, of New Haven's 14 suburbs, Meriden and West Haven are the most tolerant of multifamily housing. Both permit the construction of apartments or dense townhouses on 7% of their residentially zoned territory. (In East Haven, the comparable figure is below 1%.)¹⁵³ And Meriden and West Haven contain, between them, 56% the undeveloped multi-family land in New Haven's fourteen suburbs. These greenfield sites amount to 2% of their combined residentially zoned territory, a percentage no more than normal for a Northwest Austin suburb.

Are the exclusionary tendencies of suburbs inevitable? Or might there be a different path?

IV. NORTHWEST AUSTIN'S BOOMING MUNICIPALITIES

Greater Austin is a plausible choice for the role of Sunbelt boomtown. Between 1970 and 2010, the populations of Travis County, where most of the City of Austin lies, and Williamson County, situated just to the north, grew by a combined 234%. This rate of population growth placed Greater Austin in the top handful of U.S. metros.¹⁵⁴ By comparison, during these same four decades the headcount in the United States increased by 52%; in the Silicon Valley's fifteen cities, by 39%; and in New Haven's suburbs, by 19%. The Austin suburb of Round Rock, which in the 1990s became the home of Dell Computers, is the most conspicuous of the burgeoning suburbs in Austin's northwest

¹⁵² One possibility, particularly during the last half of the twentieth century, is racial prejudice, for example, fears that Blacks would move in from the City of New Haven. Another might have been a New England vision that suburban living works best at a low density. Fiscal motives also might have been at work.

¹⁵³ East Haven, however, does permit duplexes as of right in 34.6% of its residentially zoned land, by far the largest percentage of any locality examined.

¹⁵⁴ See also William Frey, https://www.brookings.edu/wp-content/uploads/2016/06/0320_population_frey.pdf, at 4 (placing the population growth rate of the Greater Austin metro in the top six nationally in each of the 1980s, 1990s, and 2000s).

sector. Round Rock's population exploded, partly on account of annexations, from 3,000 in 1970 to 100,000 in 2010. A central contributor to Greater Austin's growth has been Texas's local government law, which is far superior to both California and Connecticut law in suppressing exclusionary policies.

A. Introduction to the Austin Area

In 1838, the newly-formed Republic of Texas chose to site its capital on a lightly-settled bluff above the Colorado River, a watercourse less well-known than another with the identical name that lies a thousand miles further west. The Austin area is the flattest of the three regions studied, and, unlike the Silicon Valley especially, has a plentiful supply of undeveloped land. West and northwest of downtown Austin, the terrain gently rises and eventually transitions into the Texas Hill Country, widely perceived as the beginning of the American West. Winters are mild in Austin, but summers can be oppressively hot and humid.

As elsewhere, water policies have strongly influenced development patterns. In 1937, a century after Austin's founding, the area's newly-elected Congressman, Lyndon Baines Johnson, began a successful campaign to win federal funding for a dam on the Colorado River a dozen miles northwest of the city. This dam created a major reservoir, Lake Travis. Lakeway, the westernmost of the Austin suburbs included in this study, abuts its waters.

A century ago, Austin was by far the least populous of the three metros. In 1920, the population of Travis County was 58,000, about one-third that of the City of New Haven alone, and barely one-half that of Santa Clara County. The expansions of both Texas state government and the University of Texas at Austin, one of the largest universities in the United States, have contributed to Greater Austin's surge. IT firms, searching for an alternative cheaper than the Silicon Valley, have also contributed to regional growth. Austin loyalists tout many attractions, including the city's reputation as the live-music capital of the world.

Like Dallas, Houston, and San Antonio, the City of Austin is vast. It currently encompasses 300 square miles, slightly more than the entire Silicon Valley, as defined in this Article, and more than fifteen times the area of the City of New Haven. To lessen computational burdens, this study focused on zoning policies only in the northwestern

sector of Greater Austin. This area includes some of the City of Austin's most upscale neighborhoods, such as Tarrytown, as well as several of its most prosperous suburbs, such as West Lake Hills. About a quarter of this northwestern quadrant lies within the City of Austin itself, much of it land that the city annexed between 1970 and 1989.¹⁵⁵ Of the three metros, Austin has the fewest suburbs, an outgrowth of Texas local government law. The northwestern sector includes eight suburbs in their entirety. Four, the smallest in both headcount and area, lie south of the Colorado River in Travis County.¹⁵⁶ The larger four are all situated further north, in Williamson County.¹⁵⁷ In 2010, the average population density of Austin's northwestern sector slightly exceeded that of New Haven's suburbs, but was less than half that of the Silicon Valley.¹⁵⁸

As a laboratory, Greater Austin promised some advantages compared to other fast-growing Sunbelt cities. One is the presence of the flagship campus of the University of Texas, which enhances scholars' familiarity with the metro. Another is the diversity of political ideologies in Greater Austin. Voters in Travis County, "a blue dot in a sea of red," twice cast over 60% of their ballots for Barack Obama in presidential elections. Williamson County, by contrast, is solidly Republican. There Barack Obama won only about 40%. It was anticipated, incorrectly as it turned out, that these ideological dissimilarities might be reflected in noticeable differences in zoning policy.

B. The Pro-Growth Zoning Policies of the City of Austin and Its Suburbs

Part I of this Article provides summary data on the zoning practices in the three metros. By all measures, Greater Austin is by far the least exclusionary. For starters, large lot-size requirements are less prevalent in the northwest Austin quadrant. West Lake

¹⁵⁵ More precisely, the area studied includes the portion of the City of Austin that lies north of the Colorado River and west of the MoPac Expressway, extended northwest along U.S. 183 after U.S. 183 intersects MoPac. A significant fraction of the land in this sector of the city has been set aside as open space to assure suburban water supplies. See ftp://ftp.ci.austin.tx.us/GIS-Data/planning/compplan/4-community_inventory_LandUseandZoning_v4.pdf (maps at 4.3 and 4.7); see also *supra* note 131.

¹⁵⁶ Bee Cave, Lakeway, Rollingwood, and West Lake Hills.

¹⁵⁷ Cedar Park, Georgetown, Leander, and Round Rock.

¹⁵⁸ In 2010, Austin's entire northwestern sector has a population density of about 1600 per square mile. The New Haven suburbs averaged 1300, and the Silicon Valley, 3700.

Hills, the most overtly exclusionary of the sector's suburbs, does require a minimum house-lot of one-acre on 99% of its residentially zoned area. But, in two respects, West Lake Hills's form of exclusion is mild. On average, New Haven's five most exclusionary suburbs contain eight times the acreage of West Lake Hills, which comprises a mere 3.7 square miles. The New Haven five also typically impose a two-acre, not a one-acre, minimum.¹⁵⁹ And no suburb in the Austin region comes close to rivalling the large lot requirements of the Silicon Valley suburbs of Portola Valley and Woodside.

Greater Austin localities also are relatively tolerant, in single-family neighborhoods, of allowing Eichler-sized 8k lots, the bane of every New Haven suburb.¹⁶⁰ The City of Austin and its four northernmost suburbs permit 8k lots on 55% of the area they zoned exclusively for single-family-detached houses.¹⁶¹

The northwestern Austin sector also far outstrips the other metros in providing undeveloped sites zoned for multi-family housing. Although the Silicon Valley is twice as dense on average and contains many more multifamily developments, its percentage of undeveloped multifamily acreage is one-tenth that of the northwest Austin.¹⁶²

C. The Influence of Texas Local Government Law

Texas law does not direct a suburb to allow small house-lots and to zone a significant fraction of its vacant land for multi-family housing. But that is what most Austin suburbs do. These outcomes may reflect not only the policy preferences of suburban officials, but also the traditional pro-growth tilt of both the Texas legislature and the Texas judiciary. Texas's local government law has favored the evolution of muscular central cities, such as Austin, and sharply constrained the emergence of exclusionary suburbs. Connecticut, even more than California, stands at the opposite

¹⁵⁹ The northwestern sector of Austin contains a second classically exclusionary suburb, Rollingwood. In 2016, households in this municipality had the highest median income in the Austin area. But Rollingwood, with 0.7 square miles, is much tinier even than West Lake Hills. And its standard residential zone requires a house-lot of 15k, less than the 20k that blue-collar East Haven requires in its median residential zone.

¹⁶⁰ See *supra* Tables 3 and 4.

¹⁶¹ The four small Austin suburbs located south of the Colorado River, by contrast, permit 8k lots on only 10% of their combined single-family acreage.

¹⁶² See *supra* Table 5.

pole. Five Texas policies affecting the structure of local government warrant emphasis, and are presented in rough decreasing order of importance.

1. A Central City Can Veto the Incorporation of a Nearby Suburb

Texas has granted Austin and its other most populous cities the right to prevent the creation of a municipality within five miles of the city's border. The five-mile distance defines the area of a populous city's Extraterritorial Jurisdiction (ETJ), an acronym familiar to Texas attorneys and planners.¹⁶³ In the 1950s, Austin acquiesced to the creation of the small municipalities of West Lake Hills and Rollingwood, each located a few miles west of downtown.¹⁶⁴ But, over the decades, Austin typically has been hostile to the formation of new suburbs within its ETJ, perhaps on account of its aspirations to eventually annex the territory involved. The contrast with Connecticut, where small central cities are ringed by suburban towns, is particularly striking. A Texan approach to municipal formation also would have transformed the governance of the Silicon Valley. There, the sponsors of many successful municipal incorporations had sought to ward off an annexation, most commonly by the City of San Jose.

2. Counties Lack Authority to Zone

Texas, unlike California and most other states, denies a county the power to enact a zoning ordinance. Texas, however, is not anarchic. The state authorizes a county to adopt subdivision regulations, and many counties in the Austin metro have done so.¹⁶⁵ These regulations may include lot-size requirements, such as Williamson County's minimum of one acre for a lot that will rely on a septic tank for wastewater disposal.¹⁶⁶ The subdivision regulations of Austin-area counties, however, are far less stringent than,

¹⁶³ See TEX. LOC. GOV'T CODE ANN. § 42.021 (setting ETJ of 5 miles for a city whose population is 100,000 or greater); *id.* at § 42.041 (conferring veto power). Oklahoma similarly prohibits the creation of a new suburb within five miles of a city with a population of 200,000. OKLA. STAT. ANN. tit. 11 § 2-104(A).

¹⁶⁴ West Lake Hills, developed by Emmett Shelton Sr., was incorporated in 1953. Rollingwood, a creation of George B. Hatley, was incorporated as a village in 1955, and as a city in 1963.

¹⁶⁵ TEXAS LOC. GOV'T CODE § 232.001.

¹⁶⁶ WILLIAMSON COUNTY, REGULATIONS GOVERNING ON-SITE SEWAGE DISPOSAL SYSTEMS §§ 15.A(5) & 26.C(1) (2000). *Cf.* TRAVIS COUNTY SUBDIVISION REGULATIONS § 82.216(b)(1) (requiring minimum lot of five acres when a house's well will tap into either the Trinity or Edwards aquifers).

for example, the zoning controls that San Mateo and Santa Clara Counties impose on Stanford University lands.

3. The Power, Especially of a Central City, to Annex Territory Unilaterally

Prior to 2017, Texas authorized its chartered cities, such as the City of Austin, to unilaterally expand. A municipality then had the power to annex unincorporated territory within its ETJ, even over the objection of residents and landowners in the area to be annexed.¹⁶⁷ Like many of Texas's other populous cities, the City of Austin warmly embraced this invitation.¹⁶⁸ By 2017, the northernmost extremity of the City of Austin had indeed pushed beyond Travis County into Williamson County. Annexations have multiplier effects in Texas. By annexing, a city can expand its ETJ, and thus the geographic reach of its powers both to annex and to veto the creation of a new suburb.

4. Policies That Enable Developers to Obtain Utility Services

In Texas, a government that provides utility services has a duty to serve, perhaps at a fee, all lands within its service area.¹⁶⁹ The four large suburbs in Williamson County all have utility departments that provide both water and sanitary sewer services to most of their residents. In Greater New Haven, in sharp contrast, the centerpiece of some towns' exclusionary policies has been a refusal to install water and sanitary sewer mains.

A Texas municipality typically has no duty to provide utility services to lands beyond the boundaries of its service area.¹⁷⁰ But Texas statutes, true to the state's pro-growth inclinations, offer a developer of a tract in an unincorporated area the option of establishing of a Municipal Utility District (MUD). A Texas MUD averages less than a square mile in area, making some suitable candidates for the adoption of decentralized

¹⁶⁷ *Allen v. City of Austin*, 116 S.W.2d 468 (Tex. Civ. App. 1938), illustrates the traditional power of a chartered city to unilaterally annex land within its ETJ. Prior to 2017, Texas was one of seven states to confer this unilateral authority. Christopher J. Tyson, *Localism and Involuntary Annexation*, 87 TUL. L. REV. 297, 318-25 (2012). The Texas statutes that govern annexations are complex and politically contested. . . .

¹⁶⁸ A map of Austin's annexations since 1959 can be found at https://www.reddit.com/r/Austin/comments/2asmct/austin_annexations_by_decade_map/.

¹⁶⁹ TEX. WATER CODE ANN. § 13.250(a).

¹⁷⁰ *City of Livingston v. Wilson*, 310 S.W.2d 569 (Tex. Civ. App. 1958). A municipality does have a duty to serve, however, its entire service area.

utility technologies.¹⁷¹ The state environmental agency, and the city whose ETJ includes the proposed MUD, both have to consent to its formation. But both routinely do. The City of Austin’s planning area currently includes 27 MUDs, and Round Rock’s ETJ, 13. The legislature’s provision of the MUD alternative, long controversial in Texas, is yet another symbol of the state’s pro-growth inclinations.¹⁷²

The Texas annexation process commonly produces suburbs with weirdly shaped boundaries. In Connecticut, and to lesser degree California, municipalities tend to be compact. The maps of some Texas cities, by contrast, commonly look like portions of a Rorschach test. Northwest Austin area suburbs, particularly those in Williamson County, are full of holes (unincorporated areas) and include grotesquely shaped arms (typically extensions along highways or rivers.) The latter may reflect a municipality’s efforts to reap fiscal benefits and extend its zoning controls. Landowners also may initiate some of these annexations, especially when creating a MUD would be inferior to being part of a municipality with a duty to serve.

5. Texas’s Independent School Districts Have Their Own Boundaries

In Connecticut, school district boundaries largely track town boundaries.¹⁷³ Because of these congruencies, town politicians in Connecticut knew that their zoning decisions will directly affect the identities of children enrolling in local public schools.¹⁷⁴ In both California and Texas, the link between zoning and education, while present, is weaker. School districts in Texas are “independent,” and commonly have boundaries that spill over city borders. The Eanes School District, one of the highest-rated in the Austin area, includes not only Rollingwood and West Lake Hills, but also much of the territory

¹⁷¹ See Sara C. Galvan, *Wrestling with MUDs to Pin Down the Truth About Special Districts*, 75 *FORDHAM L. REV.* 3041, 3045 (2007) (reporting that the average MUD serves 525 acres).

¹⁷² Defenders of MUDs tout their tax advantages and value as a source of financing. See David Bumgardner & Keyavash Hemyari, *Dodging Mud Slingers: An Analysis and Defense of Texas Municipal Utility Districts*, 21 *TEX. REV. L. & POL.* 377 (2017) (stressing the latter). Critics point to instances of corruption and cronyism, lack of democratic oversight, and aggravation of sprawl. See Galvan *supra*.

¹⁷³ An exception is the school district that provides middle schools and a high school for the towns of Bethany, Orange, and Woodbridge.

¹⁷⁴ In recent decades, changes in Connecticut’s education policies have somewhat weakened this link.

north and west of those suburbs. The Leander ISD includes both the City of Leander and the City of Cedar Park. These non-couplings somewhat attenuate incentives for exclusionary zoning.

D. How Extreme Are Texas's Policies?

Pro-development inclinations plainly pervade Texas's legal culture.¹⁷⁵ The state has adopted many pro-growth statutes in addition to the ones mentioned. . . .

The authors of a 2006 Brookings study, after comparing zoning practices around the nation, singled out "Wild Wild Texas" for its relative lack of controls.¹⁷⁶ Other critics have bewailed the power of the homebuilding lobby in the state.¹⁷⁷ These commentators may exaggerate the distinctiveness of Texas's legal culture. The authors of a different national survey, the Wharton Index, found that twenty other states had land use controls that were less restrictive than those in Texas.¹⁷⁸ The Texas judiciary also has not been particularly hostile to zoning. Like the Supreme Courts of California and Connecticut, the Supreme Court of Texas is disinclined to uphold constitutional challenges to local zoning decisions.¹⁷⁹ The leading Texas decisions on large-lot zoning have sustained the practice.¹⁸⁰

¹⁷⁵ See, e.g., John D. Echeverria & Thekla Hansen-Young, *The Track Record on Takings Legislation: Lessons from Democracy's Laboratories*, 28 STAN. ENVTL. L.J. 439, 519 (2009) (referring to Texas's "pro-property rights" culture).

¹⁷⁶ Pendall et al., *supra* note 25, at 23=24.

¹⁷⁷ Terrence S. Welch, *Containing Urban Sprawl: Is Reinvigoration of Home Rule the Answer?* 9 VT. J. ENVTL. L. 131, 149-53 (2008).

¹⁷⁸ Joseph Gyourko et al., *A New Measure of the Local Regulatory Environment for Housing Markets: The Wharton Residential Land Use Regulatory Index*, 45 URB. STUD. 693, 711 (2008). *But see* Herkenhoff et al., *supra* note 13, at 4 (finding Texas to have the least-restrictive level of land-use regulations among the states).

¹⁷⁹ See, e.g., *City of Pharr v. Tippitt*, 616 S.W.2d 173, 175-76 (Tex. 1981) (asserting that a zoning ordinance is presumed to be valid as a constitutional matter). *Cf.* *Town of Beacon Falls v. Posick*, 563 A.2d 285, 292 (Conn. 1989) (similar); *Miller v. Board of Public Works*, 234 P. 381 (Cal. 1925) (sustaining, a year prior to *Euclid*, the legitimacy of zoning as an exercise of the police power).

¹⁸⁰ See *Mayhew v. Town of Sunnyvale*, 964 S.W.2d 922, 934-35 (Tex. 1998) (unanimously rejecting takings claim against Dallas suburb's one-acre minimum-lot requirement, and recognizing the legitimacy of ordinance designed "to protect the character of the community"); *Sheffield Development Co., Inc. v. City of Glenn Heights*, 140 S.W.3d 660 (Tex.

The Brookings study, by referring to “Wild Wild Texas,” implies that the state’s land use policies have been baleful. Herkenhoff et al., by contrast, single out Texas’s zoning system as one that other states should emulate.¹⁸¹

V. CAUSES OF DIFFERENCES IN POLICY

The histories of local zoning practices in the three metros vary widely, as have the pertinent policies of the three states that contain them. Why these variations? Three main possibilities come to mind.

A. The Growth Machine: Economic Winners When Policy Is Pro-Development

In 1976, Harvey Molotch coined the memorable phrase *Growth Machine* to describe what he thought was the ordinary tilt of local zoning politics.¹⁸² In his view, “elites,” who are inherently pro-growth, have an outsized influence on policy. His analysis appeared in the late 1970s, when tides in California had already shifted strongly against continued growth, a countertrend that Molotch himself detected.¹⁸³ And his starting assumptions that elites are invariably in control and inherently pro-growth are both questionable.

The Growth Machine conception, however, can be made more plausible. Rapid growth tends to enrich the members of many interest groups and thereby tends to strengthen their local political muscle. Homebuilders obviously have a huge stake in zoning policy. But a wide variety of other specialists also profit from growth: subcontractors, real estate brokers, construction workers, real estate attorneys, mortgage

2004) (holding that zoning that almost halved permitted housing density did not effect a taking under state constitution); *Caruthers v. Board of Adjustment of the City of Bunker Hill Village*, 290 S.W.2d 340 (Civ. App. 1956) (rejecting, on account of water and sewer considerations, landowner’s constitutional attack on 40k minimum lot requirement). *But cf.* *Dews v. Town of Sunnyvale*, 109 F.Supp.2d 526 (N.D. Texas 2000) (holding that town’s one-acre zoning violated Fair Housing Act of 1968).

¹⁸¹ Herkenhoff et al., *supra* note 13.

¹⁸² Harvey Molotch, *The City as a Growth Machine: Toward a Political Economy of Place*, 82 AM. J. SOC. 309 (1976). *But see, e.g.*, Been et al., *supra* note 8 (finding that homevoters are powerful even in New York City, the last place one might expect it).

¹⁸³ Molotch, *supra*, at 326-29 (mentioning, among others, Palo Alto).

lenders, owners of restaurants and furniture stores, moving companies, and on and on.¹⁸⁴ Because many voters pay little attention to local politics, members of these interest groups, particularly when they also are residents, may combine to dominate policymaking at city hall.

Freed from Molotch's emphasis on elites, this simplified Growth Machine theory comports rather well with the zoning histories of the three metros. During the 1930s, the population growth rate of the New Haven suburbs was less than half that of the two counties in the other two metros.¹⁸⁵ During that decade, exclusionary practices spread more widely in Greater New Haven, perhaps because fewer factions had a positive stake in promoting homebuilding.

In the Silicon Valley, by contrast, pro-growth coalitions, such as the "Establishment" in Palo Alto, were largely in political control until about 1965. By that year, Eichler and others had already converted most of the Plains into small-lot subdivisions. That transformation changed the balance of power in local politics. It brought in numerous Homevoters, who then resisted densification of their neighborhoods. In addition, after the handiest building sites had already been subdivided, construction slowed and the strength of the pro-development coalition declined. In 1965–75, Palo Alto voters turned to Residentialists, who slammed what previously had been an open door.

In the northwest sector of Austin, however, the Growth Machine continues to hum. This pattern need not be attributed to the outsized role of Austin elites, but, more simply, to the political heft of the many interest groups that benefit economically from a continuing housing boom.¹⁸⁶ Local politics in Greater Austin is not, however, inevitably in the control of pro-growthers. If fertility rates and immigration rates were to plummet

¹⁸⁴ "From 1960 until 1982 almost every member of the [Redwood City CA] City Council favored continued housing construction. Most council members have been employed in jobs related to the housing industry or in local Redwood City businesses which would benefit from growth." Cook, *supra* note 51, at 71.

¹⁸⁵ The population increase in the New Haven suburbs was 14%; in the two Silicon Valley counties, 29%; and in the two Austin-area counties, 52%.

¹⁸⁶ Greater Austin includes large amounts of the undeveloped land, much of it of modest environmental value. This fact likely lessens the intensity of environmentalist opposition to housing developments.

nationally, housing development would slow nationwide. According to the theory of local politics just presented, under those circumstances, pro-growth coalitions might increasingly lose control, even of Texas suburbs.

B. In an Older Metro, Path Dependence May Be More Profound

The insights of Mancur Olson suggest a second theory.¹⁸⁷ It is plausible that local concerns about maintaining the status quo deepen with both age of settlement and age of municipal government. New Haven's suburbs are relatively long-settled. And all the current New Haven suburbs have been in existence, with boundaries unchanged, since 1921. The other two metros were settled more recently. Moreover, as late as 1950, half or more of the presently existing suburbs in the Silicon Valley and Northwest Austin had yet to be incorporated. If age has the effects hypothesized, the venerability of Connecticut towns would have enhanced their voters' desires to impose a zoning strait-jacket.

C. The Role of Political Ideology

Academic economists, who devote their lives to the world of ideas, ironically have been resistant to the notion that ideas matter. Increasingly, however, some economic historians have broken ranks and begun to emphasize the power of ideas to shape events.¹⁸⁸ In the context of land use regulation, several economists have stressed the potential influence of political ideology on policy outcomes.¹⁸⁹ William Fischel, for example, has associated the rise of suburban growth controls with the rise of the environmental movement in the late 1960s.¹⁹⁰ Matthew Kahn has found evidence that,

¹⁸⁷ MANCUR OLSON, *THE RISE AND DECLINE OF NATIONS: ECONOMIC GROWTH, STAGFLATION, AND SOCIAL RIGIDITIES* (1982).

¹⁸⁸ *See, e.g.*, DEIRDRE N. MCCLOSKEY, *BOURGEOIS EQUALITY: HOW IDEAS, NOT CAPITAL OR INSTITUTIONS, ENRICHED THE WORLD* (2017); JOEL MOKYR *A CULTURE OF GROWTH: THE ORIGINS OF THE MODERN ECONOMY* (2016).

¹⁸⁹ On ideological trends pertinent to zoning, *see, e.g.*, Mark Baldassare & Georjeanna Wilson, *Changing Sources of Suburban Support for Local Growth Controls*, 33 *URB. STUD.* 459 (1996).

¹⁹⁰ William A. Fischel, *An Economic History of Zoning and a Cure for Its Exclusionary Effects*, 41 *URB. STUD.* 317, 331-33 (2004). The history of zoning in the Silicon Valley might be Fischel's Exhibit A.

controlling for other variables, California cities with more residents registered in left-leaning parties are less likely to permit new housing development.¹⁹¹

The varying zoning histories of the three metros thus may be partly attributable to ideological differences among residents. Stereotypes and statistics both support the notion that Texans tend to favor less regulation and smaller government. Texas lawyers, for example, are notably more conservative than those in California and Connecticut.¹⁹² This ideological difference may have boosted support for pro-growth policies, especially in Round Rock and the other cities in bright-red Williamson County. The self-selection by migrants may also have been at work. Adults are more likely to move to, and remain in, a place where other people share their values.¹⁹³ Households with pro-growth inclinations thus may have been flocking to Texas.

Even apart from ideology, a metro's growth history likely has some effect on who migrates there. A person intimidated by rapid changes in the status quo understandably would be put off by a metro, such as Greater Austin, renowned for dynamism.

VI. SUBURBANITES' DESIRED OUTCOMES FOR EXCLUSIONARY ZONING THAT THE LEGAL SYSTEM SHOULD NOT CREDIT

The analysis now takes a normative turn. The next Part uses cost-benefit analysis, a familiar if incomplete normative framework, to appraise the consequences of exclusionary zoning. To set up that assessment, the current Part clears some preliminary, but important, underbrush.

NIMBYs who speak at a zoning hearing may be insincere. They may highlight the

¹⁹¹ Matthew E. Kahn, *Do Liberal Cities Limit New Housing Development? Evidence from California*, 69 J. URB. ECON. 223 (2011).

¹⁹² Adam Bonica, Adam S. Chilton & Maya Sen, *The Political Ideologies of American Lawyers*, 8 J. LEGAL ANALYSIS 277, 299 (2016) (deriving ideologies from campaign contributions).

¹⁹³ BILL BISHOP, *THE BIG SORT: WHY THE CLUSTERING OF LIKE-MINDED AMERICA IS TEARING US APART* (2009); Matt Motyl et al., *How Ideological Migration Geographically Segregates Groups*, 51 J. EXPERIMENTAL SOC. PSYCH. 1 (2014); Jason Sorens, *The Effects of Housing Supply Restrictions on Partisan Geography*, 66 POL. GEOGRAPHY 44 (2018) (finding that states and localities with more restrictive land use controls become more Democratic over time).

importance of preserving neighborhood ambience or preventing of increases in auto traffic, when their true concerns, perhaps subconscious, are less appealing.¹⁹⁴ This Part identifies four outcomes that a utilitarian analyst should *not* credit as a benefit of exclusionary practices. The first, and easiest as a matter of ethics, is the promotion of racial segregation. The second, which poses greater normative difficulty, is segregation by social class. The final sections of this Part throw cold water on two other common motivations for exclusionary policies: fiscal advantage and cartelization of housing supply.

A. Racial Discrimination

A century ago, many supporters of zoning in the United States envisioned it as a tool for segregating residential neighborhoods by race.¹⁹⁵ During the *Lochner* era, the Supreme Court struck down explicit zoning by race, and contemporary civil rights statutes also prohibit the practice.¹⁹⁶ These well-established legal norms indicate that a zoning practice's success in promoting racial segregation not only warrants no normative credit, but indeed should be treated as a major cost of the system.¹⁹⁷

Residential racial segregation in the United States continues, but has declined. Its causes are multiple and contested.¹⁹⁸ Current public policies, among them exclusionary

¹⁹⁴ Discussions of the motivations that underlie zoning policies include Edward L. Glaeser, Joseph Gyourko & Raven E. Saks, *Why Have Housing Prices Gone Up?* 95 AM. ECON. REV. 329 (2005), and *Developments in the Law—Zoning*, 91 HARV. L. REV. 1427, 1443-62 (1978) [hereinafter cited as *Developments*] (discussing “legitimate objectives of zoning”). Been et al., *supra* note 8, summarize, at 234-38, scholars’ attempts, using regression analysis or otherwise, to measure the strength of the various motivations.

¹⁹⁵ See RICHARD ROTHSTEIN, *THE COLOR OF LAW: A FORGOTTEN HISTORY OF HOW OUR GOVERNMENT SEGREGATED AMERICA* (2017); ROBERT C. ELICKSON ET AL., *LAND USE CONTROLS* 93-94, 725-27 (4th ed. 2013).

¹⁹⁶ See *Buchanan v. Warley*, 245 U.S. 60 (1917); Fair Housing Act of 1968, 42 U.S.C. §§ 3601 et seq. Numerous states and local governments have their own fair housing laws.

¹⁹⁷ Researchers find that residential segregation by race limits the life chances of the individuals thereby restricted. See David Card & Jesse Rothstein, *Racial Segregation and the Black-White Test Score Gap*, 91 J. PUB. ECON. 2158 (2007); David M. Cutler & Edward L. Glaeser, *Are Ghettos Good or Bad?* 112 Q.J. Econ. 827 (1997); cf. Chetty et al., *supra* note 19 (stressing poverty).

¹⁹⁸ See, e.g., PATRICK STARKEY, *STUCK IN PLACE: URBAN NEIGHBORHOODS AND THE END OF PROGRESS TOWARD RACIAL EQUALITY* (2016); Sara Pratt, *Civil Rights Strategies to*

zoning, certainly have contributed, as have private practices such as steering by real estate brokers. Past practices, such as racially restrictive covenants and overt red-lining by mortgage lenders, may have cast shadows whose effects continue.¹⁹⁹ Households' locational preferences also are pertinent. If the race of neighbors is salient to a dwelling-seeker and individuals generally prefer to live in a neighborhood with many residents like themselves, even a society cleansed of racist practices might end up with neighborhoods that differed by race.²⁰⁰

1. Trends in Racial Demography

In 1968, the Kerner Commission famously declared that “Our nation is moving toward two societies, one black, one white—separate and unequal.”²⁰¹ This statement eloquently reminded the nation of challenges stemming from a legacy of slavery. But the Kerner Commission badly forecast the nation's actual demographic future. In the Silicon Valley in 2016, Blacks and Whites together constituted less than a majority of residents. And the absolute numbers of both groups have been declining. Asians and Hispanics, taken together, now outnumber Blacks and Whites in the Silicon Valley. Greater New Haven and Greater Austin, like most metros, also have witnessed increases in their non-Hispanic-White populations. Table 8 presents snapshots of the racial demography of the three metros in two years, 1950 and 2016.²⁰²

Increase Mobility, 127 YALE L.J. F. 498 (2017).

¹⁹⁹ See, e.g., RICHARD R. W. BROOKS & CAROL M. ROSE, *SAVING THE NEIGHBORHOOD: RACIALLY RESTRICTIVE COVENANTS, LAW, AND SOCIAL NORMS* (2013).

²⁰⁰ See, e.g., THOMAS C. SCHELLING, *MICROMOTIVES AND MACROBEHAVIOR* 140-55 (1978); Bryan S. Graham, *Identifying and Estimating Neighborhood Effects*, 56 J. ECON. LIT. 450, 465-90 (2018) (discussing how voluntary household sorting among neighborhoods might produce neighborhoods different from those that a social planner would choose); Lee Anne Fennell, *Searching for Fair Housing*, 97 B.U. L. REV. 349, 372-75 (2017) (reviewing studies of individuals' preferences for neighborhoods with various racial mixes).

²⁰¹ NAT'L ADVISORY COMM'N ON CIVIL DISORDERS, *REPORT OF THE NATIONAL ADVISORY COMM'N ON CIVIL DISORDERS 1* (1968).

²⁰² Racial change over time is difficult to measure, in part because the Census Bureau has periodically revised the question it includes in the decennial census.

Table 8: Population by Race			
	Silicon Valley (24 places)	New Haven Suburbs (14 places)	NW Austin Metro (9 places)
<i>1950</i>			
Total Population	c. 140,000	c. 120,000	c. 22,000
% White	c. 92%	c. 98%	c. 86%
% Black	c. 2%	c. 1%	c. 2%
<i>2016</i>			
Total Population	916,684	439,383	394,773
% White	41.1%	74.8%	65.1%
% Black	2.3%	7.7%	5.2%
% Asian	33.4%	4.3%	6.2%
% Hispanic	18.7%	11.1%	20.9%
Percentage of places less than 80% White	88% (21/24)	36% (5/14)	89% (8/9)
Suburb with highest percentage of Whites	Woodside (86.4%)	Madison (92.6%)	Rollingwood (87.1%)
Suburb with median percentage of Whites	Palo Alto (56.3%)	Milford (84.6%)	Georgetown (73.7%)
Suburb with lowest percentage of Whites	East Palo Alto (7.6%)	West Haven (52.5%)	Round Rock (50.3%)
Suburb with highest percentage of Asians	Cupertino (66.3%)	Woodbridge (15.5%)	Cedar Park (8.8%)
Suburb with highest percentage of Blacks	East Palo Alto (11.9%)	Hamden (21.5%)	Round Rock (10.1%)
Suburb with highest percentage of Hispanics	East Palo Alto (63.5%)	Meriden (25.2%)	Round Rock (30.5%)
Source: ACS 2012-2016. Note: Hispanics of all races are tallied solely as Hispanics.			

Between 2000 and 2016, the number of Whites in the northwestern sector of Austin rose by 84,000.²⁰³ During that same period, by contrast, the Silicon Valley lost 59,000 Whites, and the New Haven suburbs, 27,500. As Table 8 indicates, in the Silicon Valley the percentage of Whites fell the furthest, from 92% in 1950 to 41% in 2016.²⁰⁴ In New Haven's suburbs, whose combined populations include comparatively high percentages of Whites, the drop over the course of that 66-year period was from 96% to 75%. In 1970, all fourteen of New Haven's suburbs were more than 90% White. By 2016, two, Guilford and Madison, both east of the city, remained that way. The population of the Northwest sector of metro Austin, which is 21% Hispanic, currently is more diverse than the New Haven suburbs.

Social scientists generally have been most troubled by the residential segregation of African-Americans. In 1950, when racial segregation was more pronounced in the United States, each of the three metros had a recognized Black neighborhood with relatively defined boundaries. In the Silicon Valley in the 1950s and 1960s, many Blacks lived east of the Bayshore Expressway in either East Palo Alto, then unincorporated, or Belle Haven, an adjoining neighborhood in Menlo Park. In the City of New Haven, the Dixwell neighborhood historically was the center of Black residence, especially before the 1950s when urban renewal decimated it.²⁰⁵ In the City of Austin, Blacks were concentrated in the mid-twentieth century in East Austin, the neighborhood east of East Avenue, now I-35.²⁰⁶ In 1928, the City of Austin indeed had taken affirmative steps, in

²⁰³ In all contexts, *Whites* refers to Non-Hispanic Whites.

²⁰⁴ A valuable source on racial change in the suburbs is Myron Orfield, *How the Suburbs Gave Birth to America's Most Diverse Neighborhoods*, CITY LAB, July 20, 2012, <https://www.citylab.com/equity/2012/07/how-suburbs-gave-birth-americas-most-diverse-neighborhoods/2647/> Orfield's test for the presence of a racially integrated suburb was whether its population included between 20% and 60% non-Hispanic Whites, that is, a significant share of minorities, but not an overwhelming number. Orfield found that, in 2010, 44% of suburbanites in the 50 largest U.S. metropolitan areas lived in localities that met this criterion.

²⁰⁵ See ROBERT A. WARNER NEW HAVEN NEGROES: A SOCIAL HISTORY (1970).

²⁰⁶ See Eliot Tretter, *Austin Restricted: Progressivism, Zoning, Private Racial Covenants, and the Making of a Segregated City* (available at <https://liberalarts.utexas.edu/iupra/files/pdf/Tretter.Austin%20Restricted%20summary%20final%202.pdf>) For a history of racial segregation in the City of Austin, including maps from 1940 to 2010, see <http://projects.statesman.com/news/economic-mobility/>

violation of Supreme Court precedent, to create a “Negro District” in that neighborhood.

In all three metros, the residential segregation of African-Americans has become less pronounced. In 1970, 83% of Blacks in the New Haven metro resided in the City of New Haven. By 2016, this percentage had declined to 56%. If recent trends continue, by 2030 over half of the Greater New Haven’s Black population will be living in the suburbs. The Black population in East Austin similarly has plummeted as that area has gentrified.²⁰⁷ By 2010, more Blacks in the Greater Austin area lived outside the City of Austin than in the City itself.²⁰⁸ Between 2000 and 2016, the number of Blacks in Williamson County’s four booming suburbs—Cedar Park, Georgetown, Leander, and Round Rock—increased by 10,000, and came to constitute 4% of their combined populations. In the Silicon Valley, by contrast, the Black population fell by 3,400 between 2000 and 2016, a toll of the high housing prices in that region. And, as noted, most residents of East Palo Alto, historically majority Black, are now Hispanic.

Social scientists standardly employ a dissimilarity index to compute the extent of residential segregation in a particular area.²⁰⁹ A website that John Logan maintains at Brown University provides dissimilarity indexes for all U.S. metros.²¹⁰ Logan’s data affirm both that Black/White segregation continues to exist in the three metros studied, but that, between 1980 and 2010, it declined in each. According to Logan, the New Haven metro is the most racially segregated of the three, and somewhat more segregated than the median U.S. metro. His data indicate that the Black/White dissimilarity index in New Haven fell from 69 to 62 between 1980 and 2010. In the Austin metro, the drop was the largest of the three, from 65 to 48. Logan identifies the San Jose metro, where the drop was from 48 to 39, as the least segregated of the three regions. The most racially

²⁰⁷ <https://www.npr.org/2017/07/12/536478223/once-a-bustling-black-enclave-east-austin-residents-make-a-suburban-exodus>

²⁰⁸ <https://fivethirtyeight.com/features/austin-city-limits-population-growth/>

²⁰⁹ The dissimilarity index indicates the percentage of Blacks who would have to move to equalize the Black/White ratio in every neighborhood. See Jacob L. Vigdor & Edward L. Glaeser, *The End of the Segregated Century: Racial Separation in America's Neighborhoods, 1890-2010* (Manhattan Inst., January 22, 2012), at 2-3. It is far from clear that most members of minority groups would regard a dissimilarity index of 0 to be normatively ideal.

²¹⁰ <https://s4.ad.brown.edu/projects/diversity/segregation2010/Default.aspx?msa=41940>
Logan defines metros somewhat differently than Table 8 defines them.

segregated metros in the U.S., many of them in the northern Midwest, are far more racially segregated than any of the three examined here.²¹¹

2. Explicit and Implicit Racial Motivations for Zoning in the Three Metros

In 1920, 20% of the residents of the City of Austin were Black, a percentage then far higher than in the City of New Haven (3%) or the City of San Jose (0.5%). The Blacks who took part in the Great Migration from 1920 to 1970 tended to exit states such as Texas that had been former members of the Confederacy. By 1950, the percentage of Blacks in the City of Austin had fallen to 13%, and, by 2016, to 7%. In the City of New Haven, by contrast, the percentage rose from 3% in 1930, to 6% in 1950, to 26% in 1970, and to 33% in 2016.

Racial considerations, perhaps subconscious, probably have influenced the formally race-neutral zoning ordinances of the suburbs in all three metros.²¹² Prior to 1950, racial motivations likely were most important in Austin, a region where explicit Jim Crow policies had prevailed. After 1950, by contrast, race arguably was most salient in Greater New Haven. The Great Migration brought large numbers of Blacks to the City of New Haven, which came to most closely fit the exaggerated stereotype of a chocolate city surrounded by vanilla suburbs. In these three metros, only the City of New Haven was the site of a late-twentieth-century riot, in 1967, with predominantly Black participants.²¹³

Of the three metros, the Silicon Valley unquestionably is the top candidate for the

²¹¹ Logan also provides dissimilarity data for selected sub-metropolitan municipalities and places. He describes a Black/White index of 30 as a “fairly low” level of segregation. Of the 12 localities in the Silicon Valley for which Logan provides data, 2 exceed an index of 30. They are Menlo Park (65, attributable to Belle Haven) and Redwood City (37). For metro New Haven, Logan provides data for the City of New Haven and seven of its suburbs. Three of these eight localities have a dissimilarity index above 30: the City of New Haven (51), Meriden (31), and West Haven (45). Logan’s data include six cities in Northwest Austin. The two that exceeded 30 were the area’s oldest: Austin (54 for the entire city) and Georgetown (44).

²¹² See Andrew H. Whittemore, *The Role of Racial Bias in Exclusionary Zoning: The Case of Durham, North Carolina, 1945–2014*, 50 ENV’T & PLANNING A: ECON. & SPACE 826 (2018), and sources cited therein.

²¹³ See <https://www.nhregister.com/new-haven/article/1967-riots-4-tense-days-that-began-11813921.php>. Neither Austin nor San Jose experienced one. Susan Olzak, Suzanne Shanahan & Elizabeth H. McEneaney, *Poverty, Segregation, and Race Riots: 1960 to 1993*, 61 AM. SOC. REV. 590, 601 (1996).

one where racial animus has least tarred zoning policy. . . . In the Silicon Valley, however, segregation by social class is roughly as pervasive as in the other two regions.

B. Discrimination by Social Class*

C. Fiscal Benefits*

D. Cartelization of Housing Supply*

VII. THE BENEFITS AND COSTS OF EXCLUSIONARY ZONING*

VIII. STRATEGIES FOR CURBING EXCLUSIONARY ZONING*

IX. CONCLUSION: THE ZONING STRAIT-JACKET

Menlo Park, the city just north of Palo Alto, is the home of Facebook. To help house its employees, in 2017 Facebook, working with a partner, opened in the city a 394-unit apartment complex. The development, known as AntonMenlo, is within walking distance of Facebook's headquarters building. But, in online postings, AntonMenlo's tenants repeatedly gripe about the complex's location. It sits in an industrial area east of the Bayshore Expressway, far from the Silicon Valley's liveliest shops and restaurants. Local politics placed AntonMenlo where it is. In a Menlo Park neighborhood of existing single-family houses, even modest ones, homeowners are readily able to use the zoning process to veto the coming of multifamily housing. To escape this zoning strait-jacket, Facebook chose one of the few sites available to it.

Zoning, as practiced in much of the nation, gravely misallocates resources. Some distortions are micro, such as the mediocre siting of AntonMenlo in Menlo Park, and the lack of walkable neighborhoods in the New Haven suburbs. Others are macro. If the Silicon Valley were more populous, it would be an even more eminent world tech center. The misuse of zoning squanders land, adds to the nation's carbon footprint, warps interstate migrants' choices about where to reside, and helps price poor households out of wealthier neighborhoods. Of course, zoning, and allied endeavors such as historic preservation and the conservation of open space, can engender real benefits. But too little attention has been paid to their accompanying costs. The viewscapes along the I-280 freeway through the Silicon Valley's Foothills are gorgeous. But the protection of these vistas, along with a concatenation of other low-level decisions, has prompted the price of

an Eichler in south Palo Alto to rise to \$2 million.

It is fitting to conclude with a sobering tale from the City of Austin. Austin suburbs have been relatively pro-growth, partly on account of Texas's structuring of its local governments. Despite some self-selection of pro-growth migrants to Texas, NIMBYism is far from absent in the City of Austin. Like Palo Alto, Austin a century ago was lightly populated. Subdividers of that era created a number of low-density neighborhoods, such as Clarksville and Bouldin Creek, within a mile or two of downtown Austin. The owners of the newly minted lots mostly built single-family detached houses, a use adaptive to the market conditions then prevailing. But that was yesterday. The City of Austin's population currently is approaching one million, and the city lacks an appropriately dense central core. Mayor Steve Adler, recognizing the problem, sponsored CodeNEXT, a measure designed to increase permitted residential densities in close-in locations. The proposal stirred up a storm of opposition from homeowners in Austin's older neighborhoods. CodeNEXT's supporters were forced to water down the proposal, for example, by exempting some neighborhoods from it. Eventually, Mayor Adler bowed to the political power of the NIMBY opposition and pulled the plug on CodeNEXT.²¹⁴

Real estate and labor markets, when free to operate, enable a nation to adjust to inevitable changes in supply and demand conditions. The zoning system places large swaths of urban land in a strait-jacket, shackling the dynamism of urban life. In the words of the immortal Jane Jacobs, "The purpose of zoning . . . should not be to freeze conditions and uses as they stand. That would be death."²¹⁵ Because local governments will not reform themselves, it is time for state legislatures to take up the gauntlet.

²¹⁴ <https://www.mystatesman.com/news/local-govt--politics/codenext-code-nixed-adler-council-members-abandon-code-rewrite/3mPFCCzcmPBbFioY9SYIyJ/>

²¹⁵ JACOBS, *supra* note 22, at 253. *See also* EDWARD GLAESER, TRIUMPH OF THE CITY: HOW OUR GREATEST INVENTION MAKES US RICHER, SMARTER, GREENER, HEALTHIER, AND HAPPIER 260-64 (2011) (on "the curse of NIMBYism"); Lemar, *supra* note 22, at 1574-90 (stressing advantages of urban dynamism); Schleicher, *supra* note 8. *But cf.* Naomi Schoenbaum, *Stuck or Rooted? The Costs of Mobility and the Value of Place*, 127 YALE L.J. F. 458 (2017), <http://www.yalelawjournal.org/forum/stuck-or-rooted> (stressing value of rootedness).