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2021

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Los Angeles

Horizontal Stratification in the City:

Field of Study, Gentrification, and the Social Topography of Los Angeles

A dissertation submitted in partial satisfaction

of the requirements for the degree Doctor of Philosophy

in Education

Austin James Lyke

2021

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ABSTRACT OF THE DISSERTATION

Horizontal Stratification in the City:

Field of Study, Gentrification, and the Social Topography of Los Angeles

by

Austin James Lyke Doctor of Philosophy in Education University of California, Los Angeles, 2021 Professor Cecilia Rios-Aguilar, Chair

This study explores the extent to which academic fields of study can explain the urban fabric of Los Angeles, a preeminent site of post-industrialization and the burgeoning global cultural economy. Relationships with gentrification are explicitly examined, shedding light on the mutual dependence between cultural capital-driven reproduction in higher education and the active (re)structuring of the urban environment. Spatial analysis techniques draw on data from the US Census American Community Survey and a community college in Los Angeles County, with findings revealing the importance of lateral structural divisions and processes to empirical, theoretical, and policy debates over inequality in education, housing, and other areas of urban life. This dissertation of Austin James Lyke is approved.

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2021

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Acknowledgements

I first have to thank my family with brevity that belies the authenticity of my love and gratitude. My mom, Felicia, who indulged my intellect from a young age and whose support has been unwavering even when that intellect got in the way. My dad, Butch, and my stepmom, Liz, who've traversed a half dozen college campuses with me and have continually encouraged my pursuit of happiness. My brother, Zack, who is always there to bullshit no matter day or time. My partner, Jessica, who I'd be remiss not to credit here for making LA go from academic curiosity to my home. For that, I'm especially thankful.

In the academy, I am indebted to the Institute of Higher Education at UGA with providing me the opportunity to make a career of being interested in colleges for the better part of the last decade. Most significantly, I thank Dr. Yarbrah Peeples for seeing professional and scholarly potential in me and for modeling leadership I can still only aspire to replicate. Likewise, colleagues, professors, and friends in GCAC and at IHE made what are chalked up to be challenging professional years a true pleasure.

At UCLA, my foremost appreciation is for the support from my advisor, Prof. Cecilia Rios-Aguilar, who inspired confidence and independence as a researcher and made possible this dissertation and my professional growth realized over the past four years. Prof. Pat McDonough, who I wanted to meet as a scholar prior to arriving at UCLA, and for whom I am grateful to have met as a person. To that end, Pat's RAC, HEOC/GSEIS colleagues and friends, thanks for providing social support that softened the absurdities of this process. Finally, Cecilia's introduction to two of the field's most distinguished scholars, Dean Pedro Noguera and Prof. Michal Kurlaender, for service on this dissertation committee goes without saying as a point of significant gratitude. To this entire committee and professors at UCLA, I appreciate very much the wisdom imparted over four years, which I hope is reflected in this document. Finally, thanks to UCLA for financial support in the form of the Graduate Research Mentorship and Dissertation Year Fellowship.

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Lyke, A. (2017). Habitus, doxa, and saga: Applications of Bourdieu's theory of practice to organizational history. *Management & Organizational History*, 12(2),163-173.

Chapter 1: Introduction

A stroll past designer stores on the palm-shaded sidewalks of Abbot Kinney Boulevard just off Venice Beach might not evoke a sense of "gritty authenticity" (Zukin, 2011, p. 164) common of gentrification narratives, though the confluence of aesthetic appeal and conspicuous affluence contains clues that elicit socioeconomic and cultural antecedents of the neighborhood's late twentieth-century transformation from the slum by the sea to home of the "coolest block in America" (GQ Editors, 2012). Venice's manmade canals and eclectic boardwalk posses aesthetic qualities that initially attracted artists and bohemians-famously Jim Morrison in the 1960's-to what was once the only Black seaside community in Southern California, historical artifacts of boomtown Los Angeles now commodified as Instagrammable accoutrements for boutiques and multi-million dollar condos. In Venice, specifically, and across cities in the United States, urban artists are thus often "pioneers" of gentrification and (perhaps unwittingly) middle class (and eventually, upper class) colonizers (Cameron & Coaffee, 2005) who spawn a cycle of economic and residential disruption characterized by rising rents and home values and displacement of neighborhood residents from historically marginalized groups (most often diverse racial/ethnic and/or working class communities; Wyly & Hammel, 2004). An overarching question pertinent to urban scholars, then, is to what extent do individuals' aesthetic dispositions explain broader socioeconomic processes and policies driving neighborhood change and inequality in contemporary cities?

The pattern of residential adjustment defined as *gentrification* by Ruth Glass in 1964 often begins with the immigration of cash-poor, yet cultural capital-rich artists and adjacent bohemians to erstwhile overlooked spaces of the urban interior, at its essence, a relational process of appropriation of both economic and cultural value rooted in inner city neighborhoods; areas once plagued by disinvestment become home to cafes, bars, and cosmopolitan atmospheres that appeal to liberal professionals from creative industries like media, advertising, and technology who eventually settle in remodeled or newly constructed housing and bring with them diverse, insidious forms of commercial capital and the attention of more explicit actors of capitalist domination (Slater, 2006) and resulting structural adaptations. Zukin's (1987) analysis of gentrification in SoHo and critical scholarship since (e.g., McLean, 2014; Ocejo, 2011), as such, tends to treat the artist more as a conduit for displacement of industrial capital (and the working classes) and property redevelopment rather than as freelance agents of aesthetically-inclined urban renewal. To that end, though, municipal leaders and policy interlocutors have advocated for more programmatic redevelopment of the same kind, coupling modest economic investments with the explicit goals of courting the technology, talent, and tolerance of a collective creative class (Florida, 2002), who indeed might have otherwise followed bohemians to gentrifying neighborhoods in due course. Such plans have made their way into Los Angeles, illustrated as approved practices of neighborhood character in Westlake's Design District in a 2014 workshop of a city ordinance (see Appendix A). As it is, idealized creativity in the city-normative qualities of aesthetic appreciation, technological savvy, and tolerant and liberal attitudes steeped in enterprising gusto at multiple levels of social-environmental interaction-emerges as a variable critical to untangling economic, cultural, and historical dynamics of gentrification stemming from both demand-side (e.g., artist-as-pioneer; tech in San Francisco) and/or supply-side (e.g., commodification of art; Memphis Manifesto; Peck, 2005) causes. But from where, socially and geographically, might such creativity derive and how is it manifested in Los Angeles?

Educational researchers and psychologists who study psychosocial dynamics of creativity

frame its origins with the question of "where does novelty come from?" (Kupers et al., 2019, p. 94), noting that learning processes that spawn creative dispositions are emergent and embedded in our lived and constructed environments. Systems theorists place creative subjects within a field whose actors (e.g., schools and teachers; fine art and critics) develop and evaluate individual ideas, patents, or works of art that percolate back and forth through a broader culture composed of a variety of aesthetic spheres (Csikszentmihalyi, 1988; Kupers et al., 2019), thus fostering creative consciousness(es) in line with dominant cultural orientations of a given society. It follows that a culturally-valuable creative consciousness is rewarded in the ideological state apparatus (Althusser, 2006) of the school, which in turn contributes to legitimation of preexisting disparities in cultural capital-i.e., "proficiency in and familiarity with dominant codes and practices" (Aschaffenburg & Maas ,1997, p. 573)-that, in embodied, objectified, and rendered economic forms (Bourdieu, 1986) are accordingly mirrored and reproduced in the broader scaffolding of social inequality across and within varied geographies. Peck (2005) explains a similar logic filtered through the lens of urban creative strategies that posit, "while all people are creative, some are evidently more creative than others, and there are some that simply 'don't get it'" (p. 757), and are tied to calculated transformations of cities as fragmented sites of cultural consumption and flexible capital accumulation under neoliberalism (Harvey, 1987; 1989). Intimately connected, then, are cities-novel nodes of global cultural-economic interactions at various scales—and education—arbiter of cultural practices that help structure reproduction—in understanding generalized socio-spatial dynamics underpinning gentrification and broader notions of intraurban inequality. This study specifically delves deeper into multi-scalar associations affecting cultivation and codification of aesthetic and creative dispositions that materialize in concert with processes of production and consumption that change urban neighborhoods.

Connections between varying education levels of urban residents and gentrification are not wholly unexamined in the research literature (Freeman & Braconi, 2004; McKinish, Walsh & White, 2010), though quantitative analyses tend to oversimplify higher education as a proxy for higher earnings, at the very least, and perhaps do so at the expense of an exigency that comes with viewing negative externalities like displacement of Black, Latino, or working class residents-city dwellers less likely to hold bachelor's degrees-as more than microeconomic control variables (Slater, 2009). Documented horizontal stratification within higher education by field of study that results in varieties of human capital aligned with different college majors (explained both in the neoclassical economic context of skill development and/or more social-psychological accounts related to prior preferences and ability; Gerber & Cheung, 2008) presents specific empirical and conceptual challenges for framing the educational component gentrification as one solely of increases in aggregate bachelor's degree attainment. Field of study, I argue, can provide considerable theoretical and methodological insight into cultural dynamics underlying demand-side motivations for gentrification and the greater creative churn of urban space. Variations in aesthetic fluency codified in college majors (Silvia & Nusbaum, 2011), specifically, suggest the utility of a deeper observational analysis of the role of higher education specialization and urban inequality. Further, research on urban artists also points to the empirical oversight of aggregating creatives of disparate spatio-political inclinations into a single group marked by education level (Ley, 2003; Markusen, 2006). Succinctly, I ask in this study how a neighborhood's proportions of degree holders in various fields of study are related to gentrification and whether other patterns exist that can explicate further cultural-economic synergies that affect inequality-by class, race, ethnicity, gender, immigration status, income, etc.-within cities? Animating that question is the vast social and physical landscape of Los Angeles.

Finding Difference in Los Angeles

The social and spatial mechanisms that differentiate Boyle Heights from Beverly Hills are not entirely distinct from those that explain differences in the economic fortunes of entire regions, say Los Angeles and Akron, Ohio. Rising income inequality since the 1980s has accentuated stratification *between* American cities—with regions like the San Francisco Bay Area and New York extending their economic prominence by serving as central nodes in the *one percent*'s global playground (Manduca, 2019)—at the same time that it has intensified economic segregation (Chen, Myles & Picot, 2012; Reardon & Bischoff, 2011) and increased rent burdens on low-income people (Dong, 2018) *within* cities. But while macroeconomic forces can generally explain why high income earners flock to high income regions and high income neighborhoods within those regions, why Beverly Hills or Venice, specifically, let alone the newest gentrifying neighborhood?

Surely, localized residential flows in LA—particularly of the middle class and elites—are governed by some kind of socioeconomic scaffolding, though perhaps more conspicuous to everyday Angelenos are sensory markers that distinguish parts of the city from other places—black palm trees at dusk, the distant white noise of the interstate, neighboring storefronts with Korean and Spanish neon signage, soggy ocean breezes. Here, we can turn to Bourdieu's (1984) theory of culture, congruous with the Kantian aesthetic that dictates appreciation of cultural objects as detached from their instrumental value. The dominant class, it follows, accrue disproportionate amounts of cultural capital through advantages attained from a structural web of cognitive factors, socialization, and an education system that "inculcates...a capacity for aesthetic appreciation" (Daenekindt, 2017), of which those from the dominant class are predisposed. Class distinctions marked by the aesthetic disposition are historically exhibited in urban space, with the city itself serving as a site of national cultural prominence, but its institutions often occupying physical spaces that emphasize metaphorical distance from everyday city life (e.g., Paris' Louvre in a medieval palace; Savage et al., 2018). Beverly Hills embodies such an elite aesthetic in Los Angeles-it is an independent municipality with its own government, a glitzy commercial shopping district, a patchwork of duchies-walled-off Spanish Revival, neoclassical, and modern estates perched beyond and above the boulevards and freeways that connect it to the rest of the metropolis (indeed, the world) from which vassals—service workers and tourists—and financial capital derive. "The higher income, the higher ground" (Deener, 2012) it has been observed, though a unique blend of commercialization forces have reconstructed the once rotting boardwalk and gangland reputation of the city's prominent coastline. A very different atmosphere characterizes Venice than the more establishment vibe of the hills, perhaps best expressed by Frank Gehry's Binoculars Building-a 40-foot tall pair of binoculars sandwiched between an unassuming white office building and a five-story tree-like copper shroud—that occupies an otherwise ordinary city block on Main Street. Manifested in the neighborhood's postmodern architecture is a departure from the secluded highbrow aesthetic of Beverly Hills, more obscured in Venice are the demarcations between the urban experience, art, and metaphysical boundaries that structure daily life. It is clear to tourists visiting both neighborhoods on a single trip that Beverly Hills and Venice have different cultures, broadly defined, and that simple observation requires as much analytical attention as the economic forces that fragment the city as a whole, but seemingly unite the two aesthetically divergent neighborhoods. How, then, can we capture and characterize intersecting cultural and economic distinction among LA's many neighborhoods and why is doing so important?

For some, the LAPD helicopters that buzz above sunbathers on Venice Beach evoke an au-

thentic urban experience promised by its eclectic reputation. Many others, however, associate the municipal police force and the county sheriff's office with the racist, often violent exclusion of Asian, Black, and Latino majorities from private and public spaces across the city (De La Cruz-Viesca et al., 2018). Myriad representations and imaginaries are essential to the analysis of residential patterns in Los Angeles, as a neighborhood's cultural and economic power is necessarily dependent on its spatial position within a historically segregated metropolitan grid and by individuals'-residents, media, policy makers, planners, outside observers-perceptions of that geography. As Black neighborhoods that once served as principal backdrops for racial ferment—e.g., South Central—experience desegregation amid increases in Latino and Asian populations citywide (Clark et al., 2015) and as skyrocketing housing costs and growing income inequality reorient neighborhood boundaries and displace thousands of working class Angelenos (who are predominantly Black and Latino), concomitant are changes to the collective lived experience of more than 13 million people in the metro region. Implicated chiefly in historic and demographic intersections of aesthetic and economic variegation in Los Angeles is gentrification, a process predicated on each of those four intersecting structural spheres and a particularly polarizing multiscalar linchpin undergirding the mutable fabric of the contemporary city. While empirical analyses of gentrification have long considered its economic and cultural antecedents, and are more recently foregrounding race and racial segregation (Huante, 2019; Wyly & Hammel, 2004), a unifying explanation for how gentrification ties into a broader stratification of contemporary urban life remains an elusive, if not an insurmountable task. Constructing a grand theory of gentrification is not the intention of this study, though its continued salience to the urban condition illustrates the enduring demand for knowledge of unexamined mechanisms and variables that help individuals—those residents, reporters, policy makers, planners, and outside

observers—whose lived experiences, representations, and imaginaries define Los Angeles, do so with a sharper lens.

Academic researchers are not naive to the complexity of residential patterns in LA, with Lin (2019) noting the apt analogy between its neighborhoods and the human life course of "birth, maturation, and aging" (p. 197). Temporal circumstances compound the obvious notion that gentrification and other geographic interactions stem from actions of individuals situated within a broader socio-spatial web constrained at multiple scales, much in the same way that an embryo might eventually go to school, work for a firm, and retire to Palm Springs. The question at hand, then, is what relationships within that web have yet to be illuminated that can shed light on specific socio-spatial dynamics of LA neighborhoods at a particular time? And what can those relationships tell us about the conceptual nature of gentrification, its embededness within class structures, and the future of the urban experience writ large? Far from a fishing expedition, as mentioned, a vast literature on Los Angeles and urban restructuring points to education as a system in which the aesthetic, economic, racial/ethnic, and spatial diversity of the city is reflected; it follows that variegation within the education system might be used to assess variegation within the city.

Purpose

The questions of why do people live where they live? and why are some students art majors and others are biology majors? have been explored ad nauseum, the latter answered roughly with earnings and interests (Wiswall & Zafar, 2014) and the former, at least in Los Angeles, with *close* to where they work (Scott, 2019). While many studies of horizontal stratification by field of study have explicated connections to labor market outcomes, the links between field of study and residential patterns have only garnered occasional empirical attention (e.g., creative majors prefer urban areas; Woldoff, DeCola & Litchfield, 2011). I argue that this relationship warrants a more protracted theoretical, methodological, and empirical analysis in the urban context, given the unending metamorphosis of the city facilitated by its centrality to the global knowledge and cultural economy. Within, gentrification serves as a hegemonic force of urban redevelopment (Savage et al., 2018), necessitating it as a foundational dependent variable of interest in such an analysis, both empirically and theoretically. While the spatial patterning of Angelenos by occupation certainly speaks to the economic, cultural, and racial/ethnic divergence highlighted above, field of study offers a direct connection to reproduction mechanisms that are particularly attentive to the creative and aesthetic dispositions that more than ever define the urban experience. The purpose of this analysis, then, is to make explicit that connection for researchers, universities, activists, the media, planners, residents, tourists, and policymakers whose representations of Los Angeles are so critical to its actuality.

But nearly 6 million Los Angeles County residents do not have *any* college experience and 60,000 are without stable housing, illustrating the need to also extrapolate what connections between field of study and residential patterns mean for everyone else. With respect to gentrification, specifically, how might the educational composition of a neighborhood influence who gets displaced and where? Furthermore, does gentrification even begin to capture the social processes undergirding the spatial manifestation of educational hierarchies in LA? How might neighborhood educational composition illuminate economic circumstances more often thought of as indicative of macroeconomic conditions? Those questions and others present the opportunity to offer practical insight from an otherwise academic exercise and to consider how policy decisionsrelated to housing, finance, discrimination, transportation, labor, education, etc.-contribute to the city's social geography. I rely on analytical perspectives from the level of the neighborhood and from the individual in order to capture horizontal stratification as a dynamic, multilevel phenomenon, at once affecting the urban landscape through its past and present instantiations. That is to say, residents with degrees in different fields of study-earned at some time-live alongside students contemporaneously pursuing coursework in different fields of study, both of whom are indivisible pieces in a constant and unwieldy layering of space. While that fact does not require a terribly sophisticated explanation or even much empirical backing to comprehend, fully explicating where those interactions take place in the vast expanse of Los Angeles and whether an identifiable typology emerges benefits from a review of research and theory that address key variables-field of study and gentrification-and analytical objects and forms of knowledgeindividuals, physical space and the built environment, and boundaries. Highlighting both descriptive residential patterns across the city and correlational relationships with economic indicators and gentrification recognizes the complexity of the spatial structure of metropolitan areas in the twenty-first century, though through interpretation of results and theoretical framing, I also aim to make explicit the epistemological limitations inherent to attempting to capture the inconstant form of the city with scientific method and language.

Nonetheless, Los Angeles, a preeminent site of post-industrialization and a global capital of cultural consumption, offers an ideal empirical setting for analysis of these arguments and their conceptual underpinnings. Using data from the US Census and American Community Survey (2000-2015), I first map the horizontal stratification in LA by identifying *hot spots, cold spots*, and outliers of educational attainment in various fields of study that each have different aesthetic implications. After deducing relationships between socio-demographic characteristics and edu-

cational composition from Venice to Beverly Hills to Lancaster, I then ask how a neighborhood's proportion of degree holders in each field is related to gentrification and to what extent. Finally, I shift the level of analysis from the aggregate to the individual, parsing whether students taking courses in subjects that reflect aesthetic dispositions in line with dominant cultural practices are more likely to live in gentrifying neighborhoods. Findings are intended to reveal the mutually constitutive relationship between education and space that illustrates the lateral mechanisms fueling social reproduction amid the diverse *social topography* (Richer, 2015) of contemporary Los Angeles. Research questions formally articulated below echo those that have emerged from an empirical foregrounding of varieties of capital that shape urban inequality.

Research Questions

1) How does field of study explain the urban fabric of Los Angeles?

2) Is a neighborhood's proportion of degree holders in fields of study related to gentrification and to what extent?

3) Do college students take courses in certain academic subjects (e.g., studio art, TV/radio production) have higher propensities of living in those gentrifying neighborhoods?

4) What are implications for people/communities historically disadvantaged by urban governance in LA that has fostered neighborhood inequality and polarization at the behest of cultural imperatives?

11

Contribution of the Present Study

Despite the considerable breadth and depth (though Slater (2006) may disagree on the latter) of academic studies and popular media on gentrification and related processes, there is little that incorporates perspectives on higher education. Findings here are intended to offer sociologists, education, and urban studies scholars empirical insight into the ways in which new formulations of cultural capital and processes of social reproduction as outlined by Savage et al. (2018) and others (see Wacquant, 2018) relate to the social geography of higher education credentials and the relationship between that spatial patterning and other means of socio-spatial variegation. Making explicit connections between cultural and aesthetic forces driving inequality and mechanisms that legitimate and reproduce cultural capital in urban areas provide new insight as to the role of higher education in an increasingly connected, yet socio-spatially fragmented society. From a practical and policy perspective, this research also presents activists, policy makers, and urban planners with more precise effects of urban creative strategies. Findings reiterate that racial, educational, and income inequality, i.e., the "geographically uneven layering of social space" (Peck & Theodore, 2007), in Los Angeles does not simply stem solely from the rent gap, but rather, from a structural coherence between the social and the physical that has preceded decades of education and urban policy from which financial markets and cultural imperatives have habituated discrimination at the expense of the socio-spatial wellbeing of millions of people. An empirical point that arises for future research, then, is the notion of a more clearly delineated horizontal aspect of residential displacement where artistic graduates and students supplant residents without formal education or with credentials in fields of study in less culturally desirable fields. As urban regions like LA continue to embrace creative boosterism and *remake* the global cultural hierarchy

(Savage et al., 2018), this study offers an important insight into future research agendas focused on socio-spatial dynamics of inequality.

Chapter 2: Status of the Knowledge

Los Angeles as an Analytical Site

"Los Angeles requires periodic examination like a patient with high blood pressure." (Steele, 1993, p.7) "L.A. is the apocalypse: it's you and a bunch of parking lots. No one's going to save you; no one's looking out for you." (Manaugh, 2007)

Los Angeles was one of the most contested theoretical and empirical units of analysis in scholarly debates surrounding postmodernism in the 1980s and 1990s, with an eponymous school of urban planners, sociologists, historians, and geographers locating the muddled analytical nexus of the restructured global financial and cultural economy and its varied socio-spatial forms somewhere amid Southern California's sprawling and fragmented metropolis. Contra the scientific laboratory of concentric zones of the Chicago School, in which generalizable social processes are revealed by individuals' material connectedness to the Windy City, both Los Angeles and Angeleno are fundamentally de-centered as objects of analysis and as analysts in the face of globalization, austerity, cultural heterogeneity, and the privatization of industry and space (Gieryn, 2006; Dear, 2002). Epistemologically, Los Angeles is opaque, thus the theoretical and empirical importance of the millions of interlocutors perpetually assembling and reassembling its reality. While debates of urban theory have since moved on from LA to Johannesburg and Mumbai and to the planet as a whole (Brenner & Schmid, 2015), the legacy of the Los Angeles School is pertinent to this study and to the hundreds of empirical works in which the city serves as a backdrop for the construction of an analytical record that informs new ways of understanding the collective urban experience. In this section, I will review themes from the Los Angeles School that offer insight into the connections between field of study and residential patterns in the city and relevant empirical work in which Southern California is part and parcel of the conceptual frame.



Figure 2.1: Binoculars Building by Frank Ghery, Venice, 2018

Dear (2002) comments on the synthesis of Los Angeles School scholars as having an interest in *restructuring*—loosely, of politics/governance, demography, community, space, political economy, and the epistemology that makes critical consideration of such restructuring possible—as consistent with the broader postmodern condition, that is, the stylistic and socio-cultural practices and philosophical debates marking a "radical break" (p. 26) from the Enlightenment rationality of the previous 175 years. Urbanization of the vast desert of the Antelope Valley, the Manhattanization of Downtown Los Angeles underwritten by East Asian capital, along with the concomitant ascendence of neoliberal technocracy in state and municipal policy realms are foci of LA School scholarship like Mike Davis' *City of Quartz* (1992), which treat LA not as singularly emblematic of the type of change ushered in by globalization and late-stage capitalism, but as a test case of the presumptive form of urbanism that was taking shape across the globe at the turn of the millennium (Gieryn, 2006). Bracketing the broader philosophical debate in urban studies, empirical and theoretical concerns over restructuring and its manifestations in Southern California are instructive for this project.

Driving on the Howard Hughes Parkway to access the 405 freeway from the Los Angeles International Airport evokes three of the city's most prominent exports: Hollywood, cars, and the perhaps less glamorous aircraft industry. World War II-era and post-War Los Angeles is an exemplary case of twentieth-century urban growth fueled by the automobile and the Fordist economic system that sustained both industrial and manufacturing progress and a thriving (White) suburban middle class (Soja & Scott, 1986). That zenith of mid-century economic boom gave way in particularly dramatic fashion to the retreat from manufacturing and state-led capitalism from the late 1970s onward, with the city experiencing a roller coaster of deindustrialization and a whiplash of growth in high tech and service industries suffused with an unequal distribution of negative socioeconomic externalities along racial/ethnic lines (Pastor, 2001). From 1980 to 1990, Latino and Asian populations ballooned by more than 2 million and 900,000, respectively, as White and Black populations grew at just half the rate of the citywide average (Myers, 1999). In the shadows of a half dozen 700-foot-tall skyscrapers that rose over downtown during the same time period, the riots that ensued in the wake of the Rodney King verdict on April 29, 1992 laid bare the fracture of an urban space incorrigibly stratified by race and class, from which little institutional accountability was discernible (Bergesen & Herman, 1998; Pastor, 2001).

Twenty-first century Los Angeles remains a city in flux, with the period from 2000 to 2015 seeing an inflow of 100,000 new information jobs (for a total of 288,000) as the manufacturing sector hemorrhaged 50 percent of its nearly 700,000-strong workforce (Scott, 2019). Perhaps the most stable of LA industries, arts and entertainment, experienced a 24 percent increase compared to a 3.7 percent increase in total job growth for the county over the same time period (Scott, 2019). Those employment flows presage residential changes that encapsulate perhaps the most visible aspect of socio-spatial restructuring in contemporary Los Angeles, as creative workers orient their lives near new and redeveloped hubs of industry: Silver Lake and Echo Park adjacent to reenvisioned entertainment corridors of downtown and Hollywood, Venice and its "Silicon Beach", and Boyle Heights and its controversial galleries.

The physical footprint of postmodern Los Angeles is often termed *polycentric*, a characterization inescapable in its simplicity and expressed through theoretical and empirical machinations by critical geographers and urban economists, alike (e.g., Dear, 2002; Gordon & Richardson, 1997). Unlike the dense urban cores and neat suburban peripheries of Chicago and Washington, D.C., LA's late-twentieth-century downtown renaissance coincided with an equally robust ascent of dense housing and office space snaking 20 miles westward to the Pacific down Wilshire Boulevard. Parallel to the Wilshire Corridor beyond the Santa Monica Mountains are major production studios in Burbank and the endless commercial haven of Ventura Boulevard, some 35-odd miles north of the country's busiest shipping container port in San Pedro and 20 miles north of the fourth busiest airport in the world in Westchester. More than sheer sprawl, the physical geography of the Los Angeles metropolitan region structures lived experiences, beliefs, and interactions—"the hinterlands organize what's left of the center...urban space, time, and causality...altered" (Dear & Dahmann, 2008, p.266). Polycentricity in Southern California has unmistakable implications for the synergy of humans and the built environment; spaces of all kinds feel pliable, as capital swirls within and between miles of sunbaked interstate and boulevards, an unforgiving habitat that can easily leave individuals feeling socially, economically, and politically alienated. Zukin (1991) describes it as a "liminality between market and place" (p. 219), one where power is masked by kitsch, concrete, and the ephemeral freedom of the open road. Failed racist campaigns for city secession in the San Fernando Valley (Boudreau & Keil, 2001) and the working-class Bus Riders' Union movement that successfully pushed for more equitable transit policy (Grengs, 2002) typify diverging responses to the structural conditions of Los Angeles in the nineties, which as Lin (2019) comments have given way to a more participatory ethos characterized by urban reinvestment rather than withdrawal.

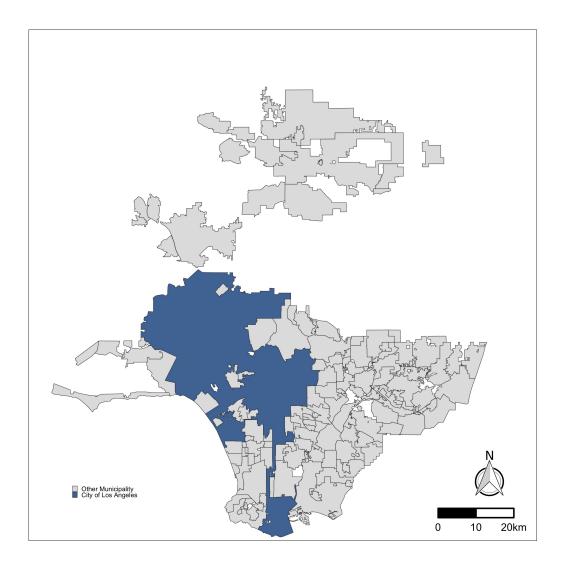


Figure 2.2: LA City Boundaries

Despite billboards on Santa Monica Boulevard directing passing motorists to an activist website entitled "GentrificationSucks.com" and single-origin-coffee-serving cafes springing up in West Adams and Westlake, Reese et al. (2011) note that little empirical research on gentrification has made Los Angeles its focus, perhaps precisely because of the postmodern bent of its most prominent critics. Three recent empirical projects in particular have made considerable strides in addressing that gap, however, with each underscoring elements of ongoing restructuring tangential to the gentrification process itself. As mentioned, Scott (2019) shows that workers benefitting from the city's flourishing knowledge-intensive economy have increasingly taken up residence near their center-city sites of employment. This residential patterning according to the spatial distribution of jobs has dovetailed with gentrification, as the proportion of Latino residents in areas like Koreatown and East Hollywood have decreased amid rising property values and a nearly 20 percent increase in White residents in gentrifying zip codes from 2000 to 2015 (Scott, 2019). Importantly, these socio-spatial dynamics are not solely reflective of atomized pinballs bouncing between neighborhoods and jobs, but rather, stem in part from concerted efforts among city policymakers, NGOs, and for-profit interests. Explained by Harvey's (1986) concept of spatial fixes in which geographic areas are leveraged as dumping grounds for capital as a means of avoiding devaluation should capital exceed profit opportunities elsewhere, downtown Los Angeles developers have furthered gentrification there through lobbying of city and county officials-including the LAPD-and through property owners' associations that have united to systematically contain and displace homeless and impoverished residents in the Skid Row neighborhood (Reese et al., 2011). Elsewhere in the city, similar coalitions compounded by the late twentieth-century financialization of the real estate industry have spurred displacement in gentrifying and non-gentrifying neighborhoods, alike (Sims, 2016). Resistance to those practices has emerged-in some cases successfully impeding the deliberate tide of gentrification (Huante, 2019)-which introduces an aspect of socio-spatial restructuring in modern Los Angeles critical to understanding its oftentimes volatile political contours.

Pastor (2001) documented organizing efforts around transit, wages, and welfare reform headed by multiracial working class coalitions that emerged following the economic restructuring and social uprisings of 1990's Los Angeles. A hodgepodge of organizational actors including higher education institutions, community organizations, and labor unions have served as primary forces of contestation to the city's prevailing neoliberal urbanism (in policy, politics, and planning) of the prior three decades, thriving not in spite of, but *because of* a social geographic terrain that is particularly conducive to progressive organizing (i.e., high (im)migration, historic income/racial segregation, robust low-wage labor market; Joassart-Marcelli, 2013; Nicholls, 2003). This critical restructuring of resistance to the spatio-political status quo in Los Angeles has implications for residential patterns and gentrification, specifically, perhaps most visible in the historic *barrio* of Boyle Heights that sits just east of the LA River opposite downtown. Epitomized by the relocation of the White artist-owned-and-operated 356 Mission gallery that opened in 2013 in the heart of the majority Latino neighborhood, sentiments of anti-gentrification activists there highlight important intersections from which the ultimate paradox of the production of urban space in contemporary Los Angeles is exposed.

Quoting an activist whose opposition to Latino-led *gente-fication* in the neighborhood seemingly stands in opposition to her own college education, Huante's (2019) case study of gentrification in Boyle Heights at once illustrates deeper gulfs in perspectives on immigrant and working class identity in the Mexican American community that coexist alongside the struggle against White-led gentrification and in mobility dynamics of education that are necessarily antagonistic to its underlying social justice imperatives. Compounding class and racial/ethnic tensions, participation from the Occidental College Students United Against Gentrification at protests in Highland Park in northeast LA suggest generational divides over gentrification and spatial dislocation in the city (Lin, 2019), just one recent contestation of many around a diverse set of political issues in which local colleges and universities have fostered important advocacy (e.g., undocumented youth movements; Fiorito & Nicholls, 2016). On display in Boyle Heights and in Highland Park, and burgeoning in West Adams, Westlake, and surely other neighborhoods not yet on the radar of the UCLA planning faculty or the *LA Times*, is class struggle, pitting those with interest in cultivating the *use value* of urban space—young people, immigrants, marginalized racial/ethnic groups—against those with chief concerns over its *exchange value*—developers, landlords, foreign investment, politicians (Lin, 2019). Indeed, Brahinsky (2020) refers to gentrification as "capitalism playing out in the landscape" (p. 5), a notion that not only implicates processes tangential to gentrification as critical elements of restructuring, but perhaps casts gentrification as synonymous with restructuring—the all encompassing, perpetual creative destruction of urban space. But is such a reduction sufficient for describing the variegated physical and social landscape of LA in 2020? If not, what are the implications and where, then, is the analytical future of the region located?

Responding to appeals from the head of the Los Angeles Community Action Network, Roy (2017) comments that the terms gentrification and displacement are inadequate to capture the "sheer disappearance of African Americans" (p. 8) in cities like Los Angeles, instead offering the framework of *racial banishment* that acknowledges the dispossession of personhood necessarily compounding possession of land, property, and claims to housing. Research documenting persistent exclusion from the LA labor market for African American males (Johnson et al., 2000), political contradictions experienced by undocumented Latino union workers (Varsanyi, 2005), and transnational class conflict in Koreatown (Park & Kim, 2008) echo the demand for acknowledging the complexities of racial geographies in Los Angeles and the spatial effects of racism that might be overlooked or sanitized in an empirical world in which gentrification, narrowly defined, is hegemonic. The task for contemporary analysts of Los Angeles is to reconcile gentrification's near synonymity with socio-spatial restructuring at the same time transcending academic binaries and recognizing the deficiencies of language and categorization in explaining both lived

experiences and empirical objects of analysis. Such lofty ambitions naturally come up against the realities of academic work, pressing the analyst into seeking some form of third-order knowledge (Bourdieu, 1977), however minuscule, that resonates with life in LA.

Defining and Measuring Gentrification

You know it when you see it might capture gentrification more effectively than the 140,000 academic studies revealed through a Google Scholar query, neither of which necessarily make it easier to understand its socio-spatial origins or to eclipse theoretical disputes in order to harmonize empirical analysis with human experience. In Venice, it is parishioners of the Friendship Baptist Church spilling out onto Sixth Avenue in the shadows of hulking rectangular concrete and glass homes as joggers weave through sidewalked scooters and electric cars and British tourists in Hawaiian shirts march towards Abbot Kinney. In Highland Park, it is half-a-block-long lines outside a Los Angeles Times-acclaimed Taiwanese cafe on York Boulevard, only half-a-block from sites of evictions orchestrated by "Sternberg's Creative Family LLC" (Lin, 2019). Though observing tattooed couples sipping natural wine al fresco in Silver Lake as LAPD poke around tents under the mural-veiled Sunset Boulevard Overpass may provide more in the way of illustrating gentrification than does grappling with nuances of Neil Smith's rent-gap theory or Marcuseian displacement, academic entreaties nonetheless provide necessary contextualization for its measurement, be it quantitative or qualitative. In that vein, a brief overview of the history of gentrification research and theory and contemporary issues in its analysis is worthwhile in considering its specific instantiation in Los Angeles and its relation to the future of urban restructuring in the city.



Figure 2.3: Friendship Baptist Church (left) and New Construction, Venice, 2020

Gentrification's ubiquity in urban life is still only a relatively young concept academically, with Glass (1964) first coining the term to describe middle class incursion in London's workingclass Islington neighborhood. Case studies in Washington D.C. and Boston brought the concept to the United States, where it took its place alongside a litany of constructs constructed and accounts accounted by urban sociologists without attracting much sustained attention in the academy or in urban planning (Lin, 2019; Gourzis et al., 2019). The critical turn in gentrification research came as geographers and urban planners began to view it as indicative of the more totalizing forces of urbanization envisioned by the Marxist philosopher Henri Lefebvre, which swiftly cleaved into opposing, yet conciliatory camps focused on its more visible demand-side causes (i.e., urban artists moving into industrial loft spaces in SoHo; Zukin, 1987) and its insidious supply-side antecedents stemming from the 1970's economic crisis and the subsequent restructuring of urban capital (i.e., from production to real estate/property, of which that of the urban core had been devalued by prior spatial fixes in the suburbs; Smith, 1979). Gourzis et al. (2019) explain that this critical attention influenced by Marxists like David Harvey on the supplyside and critical theorists like Bourdieu on the demand-side gave way to a syncopal period as a result of the early 1990's recession, in which gentrification was sanitized for "urban renewal" (p. 5) plans and its materialist foundations were largely purged from analytical attention. This naturally led to academic reaction from scholars interested in the effects of such a retreat (Hamnett, 2003; Wacquant, 2008; Slater, 2009) and the intertwined policy mobilities of neoliberal urbanism (Davidson, 2008; Ley & Dobson, 2008; Wyly & Hammel, 2005). Processes of urban restructuring and displacement in cities like Santiago, Chile (López-Morales, 2016) and Manila (Choi, 2016), together with sustained theoretical and empirical interest in the postcolonial city (Lees, 2012), expanded gentrification research to all corners of the globe in the twenty-first century. Likewise, debates over the concept of planetary urbanization (Brenner & Schmid, 2015), which calls for an urban analytic that surmounts the neatly defined empirical borders of cities, regions, and nation states, have positioned gentrification at the forefront of an epistemological reorientation of global spatial arrangements under the contemporary form of capitalism. Here, Wyly (2015) pushes for eschewing provincial dichotomies embedded in the term-demand-side/supply-side, chaos/capital, urban/other-for an understanding of gentrification as part and parcel with more generalized "upward class transformations of urban space" (p. 2534). In any case, uneven sociospatial responses to globalized circulation of labor (Gourzis et al., 2019), natural resources (Rice et al., 2020), and finance (Fernandez & Aalbers, 2019) indicate its continued analytical salience to a variety of social processes. Less clear-cut than its staying power in the Ivory Tower and city

masterplans, however, are identification strategies for correlational—let alone causal—analyses of gentrification and a cohesive methodology aimed at locating it within the socio-spatial dialectic.

Identification of underlying dynamics of gentrification, gentrified or gentrifying neighborhoods, and their collective effects within and between bounded cities and their residents are as varied as the literature itself, with imprecise and muddled definitions across and within methodological (quantitative and qualitative) and theoretical (urban sociology, critical geography/urban studies, and neoclassical economics) traditions. Empirical measurement in the context of this study or any others concerned with more than its epistemological foundations surely benefits from a definition of gentrification, at once a "tool, goal, outcome, or unintended consequence of revitalization processes in declining urban neighborhoods, which are defined by their physical deterioration, concentrations of poverty, and racial segregation of people of color." (Zuk et al., 2018). Slater (2006), alternatively, shuns defining gentrification as obfuscation of the classical analytical focus on "a process of class transformation" (p. 744), a seemingly equally complex definition as evidenced by interminable defenses from Wyly (2015; 2019) or detractors who might contest use of the term at all (e.g., Roy, 2017; Blatman-Thomas & Porter, 2019). Though such questions are expounded on more in this study's conceptual framework, I nonetheless rely on a formal identification of a gentrification variable as part of my empirical strategy to advance its understanding.

Quantitative studies typically rely on a number of metrics to classify gentrification outcomes, including but not limited to race/ethnicity, income, housing characteristics, and educational attainment (Zuk et al., 2018). At the census tract or block group level within cities, variables like change in median income over a short time period relative to the city median can quickly delineate the city into a "gentrifiable" dichotomy (Bostic & Martin, 2003; Gibbons, Nara & Appleyard, 2018). Wyly and Hammel (1999; 2004), on the other hand, execute a laborious qualitative specification of gentrifying neighborhoods across 22 cities by scouring academic and press sources for mentions of terms like gentrification and revitalization, while Hwang and Sampson (2014) reference census data with observations from Google Street View. Barton (2016) examines how qualitative and quantitative distinctions result in high variability of gentrified tracts, suggesting census-based definitions provide the best estimates of gentrifying neighborhoods (compared to a qualitative analysis by The New York Times). There also exists analytical decision of which side of a predictive model to include a gentrification metric, though most studies draw on a binary or ordinal outcome (i.e., gentrifiable, gentrifiying, gentrified; Grodach et al., 2018) or leverage a continuous proxy like the rent gap (Wachsmuth & Weisler, 2018). Methodological challenges persist in both qualitative and quantitative analysis of gentrification, particularly in capturing effects of displacement, given that that population of interest is necessarily unobservable (Atkinson, 2000). That fact puts quantitative studies at somewhat of a disadvantage in placing the analytical onus on displacement, arguably what should be the intent of critical scholarship on the topic (Slater, 2009), though activists might disagree with the adequacy of such a focus at all (Roy, 2017). Notwithstanding critiques and debates, I follow a cautious approach of adopting a conservative definition of gentrifying (as opposed to definitively gentrified) neighborhoods that takes into account housing appreciation, increased professionalization/middle class encroachment (e.g., income and aggregate higher education), and some measure of or conceptual attention to one or more types of displacement (i.e., change in non-Hispanic White population) in order to provide a path forward for model specification and analysis.

Gentrification and Education

Though academic inquiry into gentrification can seem preoccupied with its causes, its effects are equally as varied. As mentioned, displacement or dislocation of working class communitiesoften historically Black, Latino, Asian and/or immigrant neighborhoods-is an analytical outcome of particular concern (Marcuse, 1985; Newman & Wyly, 2006), though even the most sophisticated qualitative research designs might not capture notions of racial banishment (Roy, 2017) and deracinated dispossession (McElroy & Werth, 2019) that affect communities as a result of urban restructuring. The decision to focus on a particular effect of gentrification, not unlike other social scientific endeavors, is taking as given limitations about attaining truth or objectivity about the people and places involved. I argue that educational effects of gentrification, however, present especially fruitful opportunities to transcend academic binaries and are particularly responsive to Wyly's (2015) contention of understanding the evolving gentrification process as an analytical field "where individual or group differences result in a more powerful group coming to dominate any urban 'place of encounter'" (p. 2534). Likewise, gaps revealed by reviewing the literature on education and gentrification focus methodological, theoretical, and empirical objects for this study.

The formal neighborhood effects literature in economics, public health, and sociology blossomed in the mid 1990s, as academic journals experienced an influx analytical attention that drew on sophisticated, largely quantitative techniques to parse complexities of spatial concentrations of crime, racial segregation, test scores, and a host of other social variables in American cities (Sampson et al., 2002). Sociological concern over the neighborhood differentiation and reciprocal effects of those differences on residents dates back over a century, however, as famed Chicago School scholar Robert Park observed of 1920's Chicago, "Each separate part of the city is inevitably stained with the peculiar sentiments of its population." (Park, 1925, p. 6 in Gieryn, 2006, p. 17). Systematic reviews of research on urban neighborhoods since have located Wilson's (1987) Truly Disadvantaged as a catalyst for interest in understanding how concentrated poverty and racial segregation, specifically, affect child and adolescent development (Pearman, 2019; Sampson et al., 2002; Sharkey & Faber, 2014). Somewhat unsurprisingly, scores of studies have found detrimental impacts of living in impoverished and segregated neighborhoods on educational attainment independent of economic effects alone (Sharkey & Faber, 2014). Pearman (2019) uses those findings as a starting point for examining the literature of gentrification effects on students, given that a change in neighborhood housing and demographic composition inherently disrupts concentrated socio-spatial processes that impact test scores, achievement, and organization of schools. Though the author makes questionable inferences regarding the "considerable promise" (Pearman, 2019, p. 152) that gentrification provides for reduction of criminal activity and concludes that its effects may be "inconsequential" (p. 151) based on the findings from a few dozen research articles, the review nonetheless highlights conceptual and empirical limitations of narrowly focusing on effects of the intersection of urban restructuring and education rather than on a more holistic understanding of the socio-spatial dynamics undergirding those interactions.

A number of studies—primarily in geography and urban studies outlets—not appearing in Pearman's (2019) review do just that, ranging from dynamics of neoliberal urbanism (charter schools in Atlanta in Hankins, 2007; school choice in Sydney in Sherry & Easthope, 2015) to displacement (Marcuse in Butler et al., 2013; *Jiaoyufication* in China in Wu et al., 2016) to cultural capital (Bridge, 2006; Wu et al., 2017). Discord between geography and education literature illustrates the broader weakness in academic analysis of socio-spatial conditions, with quantitative or qualitative research designs (and by extension, data) often driving boundary definition (and by extension, knowledge) in neighborhood-centric studies (Petrović et al., 2019). Indeed, the neighborhood itself as an empirical constraint might explain the relative dearth of theoretical and methodological insight at the intersection of gentrification in the United States and its highly stratified, often racially-segregated education system. It surely can explain the curious lack of higher education as an empirical focus in gentrification effects research in American educational research, where students are often treated as place-bound in their home communities (Hillman, 2016) or as highly mobile consumers for which the college campus is less a home and more a layover en route to Chicago, New York, and LA (Armstrong & Hamilton, 2013; i.e., they are likely to be seen as causes or effects of gentrification). The commuter/interloper and town/gown dichotomies (Gumprecht, 2006) in American higher education are less pronounced throughout the world, where campuses are not nearly as residential as those in the United States and where university students are much more integrated into existing neighborhoods and communities (Nakazawa, 2017). In cities as large as Beijing (Gu & Smith, 2019) to the 60,000-strong market town of Loughborough in the UK (Hubbard, 2008), the concept of studentification-whereby students are implicated in processes of socioeconomic and cultural urban restructuring and displacement not dissimilar from more widespread definitions of gentrification (Smith & Holt, 2007)-represents the strongest analytical link between gentrification and higher education in the research literature. Instructive from these studies are processes implicating cultural and economic forces that direct us to theoretical, methodological, and substantive questions more thoroughly explored in this study.

Perhaps most insightful is Smith and Holt's (2007) contention that studentified segments of the city foster preferences for "types of lifestyles, linked to the consumption of particular forms of accommodation, housing, and location, and retail and leisure services" (p. 157) that inform later residential patterns and are reproduced throughout the lifecourse. The idea that students arrive at universities (or fail to attend at all) with an uneven distribution of cultural capital that primes them for different college experiences and occupational trajectories is well documented (Armstrong & Hamilton, 2013) and is foundational to research on social stratification in the United States, though considerably less attention, if any, has examined spatial manifestations of variegated higher education pathways. Universities' centrality to the so called *knowledge economy* makes such connections even more imperative to understanding broader gentrification dynamics, as students and highly educated workers congregate in urban centers that are not only financial hubs, but breeding grounds for generation of a new form of cosmopolitan cultural capital (Savage et al., 2018) set to fuel reproduction and surely contribute to further "uneven layering[s] of social space" (Peck & Theodore, 2007, p. 749). These processes are already playing out in cities around the world, as documented in overlapping residential patterns among youth, students, and gentrifiers in Canada's largest urban centers (Moos et al., 2019) and in the studentification of American college towns (Foote, 2017). Though the increase of aggregate bachelor's degree production has long signaled gentrification, increases in certain *types* of bachelor's degrees aligned with varying degrees and types of cultural capital appears even more salient to the future of restructuring in cities like Los Angeles.

Higher Education Ecology in Los Angeles

An important methodological distinction warrants further explanation here, as the analysis of residential patterns among students in Los Angeles below only captures those from one institution. Indeed, the ecology of higher education in Los Angeles County is as extensive and polycentric as the metropolitan area itself, with nearly a hundred non-profit colleges and universities serving hundreds of thousands of students spread out from the desert to the coast. Figure 2.3 shows the distribution of the college landscape in the county in 2015, though notably I have excluded the vast empire of over 100 for-profit institutions headquartered in LA that operate in the unique asynchronous space of suburban office parks and the internet.

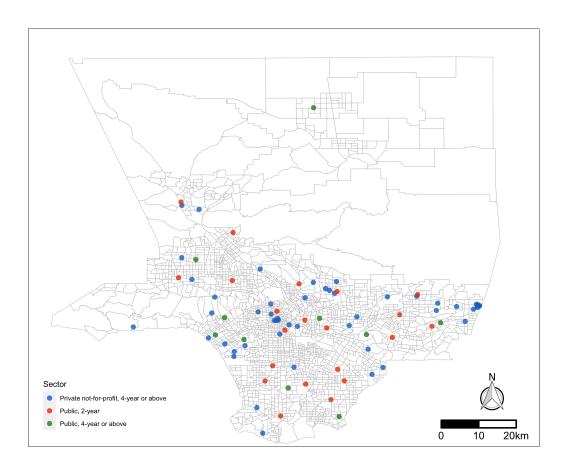


Figure 2.3: Public and Private Non-Profit Colleges, 2015

While pillars of the nation's higher education ecosystem are anchored in Los Angeles– from UCLA in Westwood to USC south of downtown to Caltech in Pasadena to the Claremont colleges on the eastern edge of the county—unmistakable in a cartography of the region's network of colleges and universities is the spatial significance filled by the California Community College System. Traversing the county's endless freeways reiterates that point, with its nearly two dozen community colleges conspicuously marked by large green signs just before off-ramps from Lancaster to Long Beach. Unlike the Oxbridge-esque residential colleges of Claremont or the billion-dollar research enterprise in Westwood, the city's community colleges are the primary conduits of education-based mobility for a majority of Los Angeles students. In 2015, for example, 51 percent of the nearly 700,000 undergraduates enrolled at public and private non-profit two and four-year institutions in LA County attended community colleges (US Department of Education, 2020). These data may confound casual observers of American educational dynamics, particularly those in media or other elite professional circles whose college lens is prepossessed by four-year residential institutions in New England. As it is, the prominence of community colleges in the higher education system presents considerable economic and geographic implications for the ever-churning urban environment.

Explicit in their categorization is the unique spatial context of community colleges, intended to serve not only a mass population of students, but to do so locally, near jobs, families, and previous educational institutions (Brint & Karabel, 1989). Such open access, both in education and geography, has historically functioned as a means of maintaining existing power structures throughout society via *cooling out* students from the college pipeline, constricting labor market opportunities to vocational realms, and relatedly, absorbing those who might otherwise create excess labor supply in some sectors (Brint & Karabel, 1989). Though labor market returns for terminal community college credentials can be positive (Jepsen et al., 2014), the institutions also serve as viable paths to bachelor's degree attainment by offering core curriculum for transfer to four-year universities. But the rising price of higher education compounded with extant racial, spatial, and socioeconomic inequities in attainment have together reinforced challenges baked into the historical treatment of community colleges as stop gaps in the education-labor pipeline (Rose, Colina-Neri & Rios-Aguilar, 2019), which researchers have used to illustrate the social-geographic mismatch between educational aspirations and spatial realities of contemporary urban communities (Reyes et al., 2019). Thus, the analysis below situates LA County's nearly two dozen community college campuses as a spatially-conditioned institutional pillars that provide insight into how educational processes coincide with urban residential patterns.

Field of Study

The major choice process of participants in Armstrong and Hamilton's (2013) *Paying for the Party* offers rich insight into the dynamics of horizontal stratification by field of study that complicate neoclassical economic assumptions of choice as a static decision (see Patnaik et al., 2020 for a review of primarily economics literature on major choice), where "students who did not arrive focused could easily get lost, lured into sexy alternatives, or delayed by bouncing around from major to major" (p. 184). Equipped with parental support, "appearance, personality, and charm" (Armstrong & Hamilton, 2013, p. 70), and financial resources, women at the large public university were tracked into careers in finance, media, and other desirable professions in coastal cities by leveraging preexisting social and cultural capital in academic and extracurricular structures designed to facilitate reproduction more than upward mobility. For those lacking requisite tastes, social networks, and academic savvy, downward mobility was likely, leaving some women "geographically blocked" (Armstrong & Hamilton, 2013, p. 213) from aspirational dating pools and careers that had driven them to specific majors in the first place. Of interest to this study are the clear connections between precollege distributions of social and cultural capital that facilitate field of study choices in college and eventual fulfillment of social and occupational desires with clear geographic predispositions, i.e., large urban centers. Unknown from Armstrong and Hamilton's (2013) account is where precisely in cities do privileged students and graduates converge, and equally significant, where less successful and non-college attendees fit in that socio-spatial web.

The primary explanatory variables used in this research for analysis of both gentrification and wider spatial patterns of inequality in LA are bachelor's degree fields of study and coursesin-progress in a diverse array of academic fields, as mentioned critical components of horizontal stratification within education that not only impact earnings, but structure the distribution of human capital across nation states dependent on a highly educated (and vertically stratified) labor force (Gerber & Cheung, 2008). To that end, experimental findings from Wiswall and Zafar (2015), building on other microeconomic studies (Arcidiacono, 2004), document heterogeneous tastes along with earnings potential as primary determinants of field of study choice in college and others have followed suit exploring non-monetary factors beyond taste alone (e.g., family; Patnaik et al., 2020) that influence major selection (Armona et al., 2019). A number of higher education studies draw on Holland's theory of person-environment fit-i.e., students are drawn to academic environments that compliment their personalities-to make similar conclusions, though with more emphasis on secondary and postsecondary contexts (e.g., Allen & Robbins, 2008; Gilbreath et al., 2011; Wang, 2013). Those findings echo research in psychology related to the conceptual focus of the present study, where students in arts majors are found to embody more personal attributes associated with creativity (defined through various psychometric scales) than their peers in nonarts majors (Silvia & Nusbaum 2011; 2012). In the one study perhaps most closely related to the present project, Woldoff et al. (2011) find through analysis of survey data that such *creative* students are more likely to have post-college residential preferences for cities and the lifestyles and cultural amenities therein. Though the person-environment fit and the proclivity of creative majors to congregate in cities like New York and LA is intuitive enough, less so is the question of why?

Students' information regarding earnings potential of various majors and knowledge of fine art, literature, and classical music upon entering college are well documented as dependent on prior exposure (tied to class origins and habitus), one of many ways in which cultural capital impacts educational outcomes (Bourdieu & Passeron, 1977). Uneven distribution of cultural capital—whether one adheres to status attainment arguments that suggest the ability to procure cultural capital independent of education and socioeconomic background (Davies & Rizk, 2018) or not—is thus particularly relevant to the value of the current study and answering the questions of why students choose certain majors, maintain or develop residential preferences for certain cities and neighborhoods, and why those two things are connected. Empirical links between field of study and cultural capital buttress its logical relationship to stratification processes (Davies & Guppy, 1997), further evidenced by variation in consumption patterns with respect to higher education concentration documented in the Netherlands (Van de Werfhorst & Kraaykamp, 2003) and by positive correlations between class and attainment in liberal arts and science fields in British and American contexts (Goyette & Mullen, 2006; Van de Werfhorst et al., 2002). Structural mechanisms driving the gender wage gap and divergent premiums placed on earnings in major choice selection by gender further document broader effects of stratification by field of study (Charles & Bradley, 2009; Quadlin, 2019), despite a relative closing of gender gaps across fields of study in

recent cohorts (van de Werfhorst, 2017). Correlations between occupational structures and major choice by race/ethnicity and immigration status (see history of Filipino-American nurses, Choy, 2009; Ma, 2011) and by college financial aid (Quadlin, 2017) speak to the existence of a seemingly endless array of intersecting social variables that structure field of study choices and outcomes, patterns that are surely imprinted in urban space.

Where residents with degrees in various fields of study are clustered (and alternatively, where their absence is clustered), then, offers a unique empirical entry-point into intersecting layers of class-based, gender, and racial/ethnic inequality in LA that are particularly attentive to differences in aesthetic and cultural components of neighborhoods. Relatedly, current student interactions with the social geography of the city shed light on distinction mechanisms visible in the contemporary structure of academic disciplines. Are art students gentrifiers? Or is it business majors clustered in art-commodified neighborhoods? Do STEM and education majors observe stratification processes from the walled-off suburban periphery? The answer to those questions is surely attainable through empirical analysis, though the question of why *precisely* those relationships may reveal themselves in the urban fabric of Los Angeles calls for extended review of related social theory attentive to social and physical space and scale.

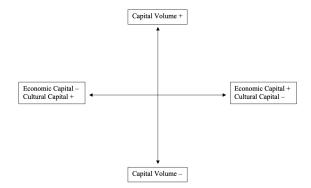
Chapter 3: Theory

Name and major is a common icebreaker on the first day of a new college course, a telling practice that indicates just how much of a signifier field of study is to a certain class of people in this case, tenured professors, though contingent faculty, teaching assistants, and even fellow students are no less savvy as to the personality traits embedded in academic disciplines. Binder and Abel (2019) found that undergraduates at Harvard and Stanford, for example, expressed disapproval of the workaday professionalism of Penn and Georgetown business majors and the one-dimensional technical programs at MIT and Caltech, instead touting their own liberal arts concentrations as superior markers of well-rounded cosmopolitanism valued in labor markets and social cliques on the coasts. True, the same discourse surely does not exist at less status-conscious institutions, though basic perceptions regarding the differences between STEM disciplines and the humanities are widely recognized in the American middle class consciousness (McMurtie, 2019).

A more intimate introductory practice might press respondents to disclose *where do you live?* or *where are you from?*, innocuous enough to not offend, but like the question of major, a classification mechanism that locates a person in a geographic hierarchy and allows for rapid judgments about tastes, class, ethnicity, consumption practices, and cultural affinities. In Los Angeles, living in Venice might label someone as laid-back, a bit of a free spirit who perhaps enjoys cannabis and the beach, but who can also afford a \$3000-per-month one-bedroom apartment and maybe works for a trillion-dollar multinational tech corporation. Beverly Hills surely signals affluence, likely older than new, and a penchant for luxury goods, whereas South LA or the far reaches of the metro might signal the opposite. A white, tattooed creative living in Boyle Heights or northeast LA might fall under the label of gentrifier. Bracketing those hypotheticals are socio-cultural understandings of place that are not wholly independent from the identities of the actors engaged in such an exercise and the relational discourses therein, i.e., the where are you from? greeting would result in entirely different presumptions and classifications if the participants were from different cities, different racial/ethnic backgrounds, different class backgrounds, etc (Bourdieu, 1984; Atkinson, 2011). In any case, what becomes clear in the question of college major and place of residence are the varied cultural distinctions attached to their engagement, both discursively and in practice. Theoretically, this analysis is concerned with the socio-spatial relationship between the two classificatory mechanisms, though the hope is that revealed through analyses is an even broader understanding of difference in the city. In the section that follows, I outline how I arrive at conceptualizing field of study/residence synergies, first through recognition of the processes by which Angelenos interact with their continually restructured social environment, then by emplacing them within the physical grid that governs and is governed by those practices, and finally by engaging with the specific question of gentrification. I then offer a postscript outlining why field of study represents a critical empirical unit of analysis for understanding inequality in Los Angeles.

Differentiation: Habitus and the Aesthetic Disposition

At its innermost analytical kernel, this study is concerned with classification—or processes by which humans distinguish something from the other, of others, of themselves, who are also classifiable through appropriation of that matrix of classified things (Bourdieu, 1984)—perhaps, electrical engineering from art history, the Valley from the South Bay, or strategies with which diverse Angelenos make such determinations. What is evoked here and in the hypotheticals above is Bourdieu's (1984) idea of habitus, "both the generative principle of objectively classifiable judgments and the system of classification...of these practices" (p. 170). We can say that decisions to major in art history, to live in Venice, to listen to indie rock, to drink craft cocktails and natural wine, and the cognitive processes undergirding those choices are produced not by on-the-fly cost-benefit analyses or thoughtful moral calculations or even considered sensory pleasures, but rather through their relation with the "objective structure defining the social conditions" (Bourdieu, 1977, p. 78) that produced the decision-maker's habitus in the first place and that is reproduced over time (the objective structure being "macrolevel arrangements of differentially valued material and symbolic resources" (Lizardo, 2004, p. 394) or more colloquially, a social class structure). This social space is neatly defined as two intersecting axes-the y-axis representing the total volume of capital and the x-axis, various compositions of cultural and economic capital. As it is, the top half constitutes the domain of the dominant classes that stand in opposition to the farmers, school teachers, and laborers below. I recreate Bourdieu's (1984) diagrammatic depiction of that space in Figure 3, within which he located similar and divergent "class fractions" (p. 126)—e.g., executives near the top of the y-axis and in the middle of the x-axis; artistic producers and college professors in the top left quadrant; trust funders and capitalists in the top right quadrant; craftsmen in the lower right quadrant; school teachers lower left; and farmers at the nadir of total capital-and their lifestyle and cultural consumption patterns-e.g., renters, Warhol appreciators, Kafka readers, jazz listeners in the top left; property owners, tennis players, hunters in the top right; sparkling white wine drinkers, circus goers, and accordion players below. Importantly this grid is imbued with temporal conditions (as positive, negative, or neutral trend arrows next to the various occupation-based class markers) that work to show



that a given social structure is at once being structured, contested, and reproduced.

Figure 3.1: Bourdieu's Social Space

Atkinson (2011) remarks that contemporary cultural sociologists have sought to transcend the anachronisms of a social space illustrated through the lens of Paris in the sixties, notably advocating for theories that emphasize a more *reflexive* mode of cultural consumption upon which identities are constructed by the individual, unfettered by the trappings of class-based dispositions and their mechanistic reproduction (Sweetman, 2003). At first glance, the notion of reflexivity would appear particularly consistent with present-day Los Angeles-i.e., teens lined up outside streetwear boutiques on Fairfax Avenue or the towering billboards looming over club goers on the Sunset Strip seem to embody a place-specific lifestyle that "give material form to a particular narrative of self-identity" (Giddens, 1991, p. 81 in Benson & O'Reilly, 2009). The phenomenon of individuals' relationships to the aesthetic disposition is at the heart of reconciling the manner in which culture is enacted, with Bourdieu's (1984) theorization conforming to the Kantian aesthetic that valorizes a detachment between art and other aesthetic experiences (form) and the mundanity of everyday life (function). In practice, a photograph of a woman's arthritic hands could elicit a reaction that leans on emotion, "'poor old thing'" (Bourdieu, 1984, p. 44), while another might sound more aloof, "'it's the very symbol of toil'" (Bourdieu, 1984, p. 45).

The capacity of the latter individual to observe or experience artistic expression independent of its instrumentality, to abstract a representation of a material object to its symbolic station, is a near "guarantee" (Bourdieu, 1984, p. 28) of their dominant class origin and/or education, generally both. Driving antipodal aesthetic dispositions—and other class and education-dependent practices and perceptions—is of course, habitus, "history turned into nature" (Bourdieu, 1977, p. 78). Returning to our hypothetical drive up Fairfax, then, is the object of analysis a particular reflexive mode of cultural consumption—i.e., engaging in the commerce of streetwear—or rather, the *distinction* between those who wonder why anyone would wait in line for a t-shirt versus those who appreciate it (or at least, understand it) as an aesthetic experience independent of its use, from which its seeming *gratuity* (Bourdieu, 1984) is part of the appeal?

Rather than marking an epistemological break, Lizardo and Skiles (2012) explain that the (post)modern phenomenon of *omnivorousness*—in which individuals consume cultural objects in a seemingly more extensive, democratic manner contra that of the isolated, legitimate cultural objects of elite *snobs*—is actually consistent with Bourdieu's (1984) understanding of the aesthetic disposition, which like that of 1960's France, is highly dependent on the transmission of cultural capital in families and its legitimation in schools. The transposibility of the aesthetic disposition to a wider and more heterogeneous set of cultural objects and the practices attached to its engagement is thus subject to the same structural embeddedness as before. As the dynamics of twenty-first century cultural capital are relocated and legitimated through the social, aesthetic, and commercial life of the city (Savage et al., 2018), the empirical significance of urban environs in conceptualizing broader economic and cultural structures is made clear. But where do we look *within* the city for insight?

Differentiation: Demarcating Boundaries

Ceding cartographic sovereignty to technology and real estate corporations has made navigating the sprawl of Los Angeles less painful for commuters and tourists, though distinguishing the million dollar bungalows in "Silver Lake Heights" (Nicas, 2018)-an artifact of algorithmicallygenerated space allegedly bisected by Silver Lake Boulevard just east of the Silver Lake Reservoirfrom the rest of the greater Silver Lake neighborhood indicate the inherent opacity in the modern processing of boundaries, be they spatial, institutional, or linguistic. In a city as economically and ethnically diverse as LA, "one tends to see only fragments and immediacies, fixed islands of myopic understanding generalized to represent the whole" (Soja, 1986, p. 255), its neighborhoods encapsulating the city from the inside out and the outside in. It is that spatial arrangement upon which the imprint of social hierarchies is fashioned, intersecting axes of capital layered upon each other, leavened with temporal contingencies and intractable histories of exclusion based on gender, race, age, ethnicity, and immigration status. Such arrangements are sustained and transmuted through practices and the reproduction of practices dependent on the relative sociospatial positions of millions of active agents, that is, Angelenos are not just composites of their finances, education, and friendships, but are emplaced in tents, apartments, condos, and mansions in Venice, Skid Row, and the Hollywood Hills. Within that socio-spatial web are obvious sources of differentiation, what Richer (2015) refers to as a *social topography* constructed through material, symbolic, and discursive practices that together "wall off parts of the built environment" (p. 362) even where no physical boundary exists. A topographical vision informs the spatial manifestations of habitus and the aesthetic disposition that cordon off sections of Los Angeles and illustrates how we might begin to pinpoint empirical relationships fueling the churn of restructuring in the region.

The extensive reference to LA's many neighborhoods in this study serves analytical purposes, both empirically—"constellations of names...are like stars directing itineraries" (De Certeau, 1984, p. 110 in Richer, 2015, p. 351)—and methodologically—"In naming...time and space are reduced and packaged to serve the needs of here and now, making the lived experience of the urban increasingly vicarious" (Soja, 1986, p. 270)-but place names are also instructive in conceptualizing the everyday practice of boundary-making that stratifies the city. As it is, where do you *live?* salutations are not intended to reveal a specific street address or type of dwelling, but rather a neighborhood or region from which inferences about status, tastes, ethnicity, and other social categories can be deduced. Richer (2015) explains that a social topographical framework accounts for the "ascriptive" (p. 362) nature of physical spaces, a reciprocal metonymic tie between individual and the distinctive socio-spatial features of a particular place with which they are associated. If an affluent and glamorous Angeleno lives in Beverly Hills, the name Beverly Hills confers on the Angeleno a characterization of affluent and glamorous that is achieved directly through their relationship with the signifier, Beverly Hills. The point being that the Angeleno is not inherently affluent and glamorous, but that they become so through their identification with the signifier of Beverly Hills and not vice versa. Though it is tempting to insist that Beverly Hills is affluent and glamorous because of the traits of its individual residents or its physical grandeur, it is instead the unattainable something, "to what is in [Beverly Hills] more than [Beverly Hills]" (Žižek, 1989, p. 107)¹, that names, specifically, seek to reconcile in practice, i.e., not the "empirical reality" of Beverly Hills, but a "purely structural function" (Žižek, 1989, p. 110). Cutting through the discursive

¹Žižek (1989) uses the example of Marlboro advertisements, which only take on their symbolic American imaginary when Americans identify with the image and experience America as depicted in the ad.

spatial intricacies of Los Angeles, "imaginatively mystified in an environment more specialized in the production of encompassing mystifications than practically any other" (Soja, 1986, p. 270), as it is, benefits from analysis of the complimentary practices of differentiation outlined by Richer (2015) and from attention to the relational mechanisms underpinning their activation.

Students from Beverly Hills High School staged a manufactured school walkout in 2018 to protest the westward expansion of the LA Metro's Purple Line, the current terminus of which is in Koreatown, just 5 miles west of its origin downtown. Threatened by the prospect of public transportation making ostensibly public spaces in the enclave more accessible to those who might otherwise be excluded or deterred (i.e., the carless, bus-dependent), the mobilization of Beverly Hills residents and the calculated locus of the city's high school in their efforts to block a new subway station get at the heart of Richer's (2015) notion of material practices that serve as placebased stratification mechanisms aimed at upholding and expanding existing status hierarchies. At issue is less the physical infrastructure in question—the neighborhood is not a (wholly) gated community despite peripheral boundaries marked with black and gold shields along Los Angeles' main arteries and the present public transportation system does not preclude individuals from traversing its borders-but rather, the incursion of a new subway line represents a perceived (material) threat to residents' sense of ownership of the community. An independent city with its own government, schools, and police, sure, but the cultural value of 90210 zip code far outpaces its physical and administrative reach; the decision to live there, then, constitutes an appropriative act, a claim to the glitz and glamor represented in Hollywood imaginary "which is thereby converted into the reified negation for all those who are unworthy of possessing it." (Bourdieu, 1984, p. 280).

The opening of the Beverly Hills Purple Line station in 2025 will likely not dramatically up-

end the socio-spatial order of Los Angeles, owing in part to the region's less tangible sources of differentiation and exclusion. Sustained social and spatial proximity of Beverly Hills residents to the newest boutiques and restaurants, for example, separate those in-the-know from less informed interlocutors piped in by subway, tastes that mark status distinctions as or more effectively than the white and black street signs of Rodeo Drive. By "rais[ing] the differences...in the physical order of bodies to the symbolic order of significant distinctions" (Bourdieu, 1984, p. 175), individual preferences and dispositions are reflected in the social structure through their associations with the lifestyles of certain groups. Thus, one could gain increased physical access to Beverly Hills, but still experience exclusion via patterns of cultural consumption or aesthetic dispositions not valued by the dominant class (in this case, Beverly Hills residents or those with valued cultural capital recognized as legitimate by gatekeepers). Importantly, such distinctions exist laterally within the dominant/dominated binary-the tastes of Beverly Hills residents differ not only from those of Boyle Heights residents, but from those of Venice residents, despite most Venice and Beverly Hills residents occupying positions on the top half of Bourdieu's social grid. In line with the "horizontal boundary-drawing mechanism" (Lizardo & Skiles, 2012, p. 273-74) undergirding the propensity for omnivorous consumption patterns, socio-spatial forms of symbolic exclusion in Southern California are surely as or more pronounced among those within the dominant class than between vertically divergent class fractions.

Indeed, Lin (2019) showed that gentrifiers in northeast LA drew symbolic distinctions between gentrifiers in other neighborhoods by using the same tactics of negation that bourgeois Parisians in the sixties might have used to distinguish themselves from farmers, with an Eagle Rock resident remarking of her neighborhood, "'it's like Silver Lake without the tattoos!'" (p. 35). Using a social topographical lens to illuminate relational processes underlying links between "status and place" (Richer, 2015, p. 363) in the city naturally presents implications for conceptualizing gentrification and its manifestation in Los Angeles, which necessitates a theoretical coda that further clarifies the analytical task set forth in this study.

Coda: Gentrification

Lawton (2019) explains that much of the theoretical debate surrounding gentrification is concerned with rescuing it from the overdetermined or underdetermined treatment it receives in empirical research, depending on paradigm, at once obfuscating the more widespread ills of the urban condition outside New York City and serving as an analytical lodestar for tackling the diverse crises of planetary urbanization (Wyly, 2015). The idea that a singular term with such a diverse analytical history might fail to accurately describe urban manifestations of institutionalized racism (Roy, 2017), financialization (Moreno, 2014; Wijburg et al., 2018), and climate change (Blok, 2020; Harper, 2020) is somewhat self-evident and its most appropriate theoretical framing surely lies somewhere between distraction and blueprint. Where it fits into the relational interplay between social structure and urban space that I have outlined so far is the task in this analysis and I aim to conceptualize gentrification as a specific facet of a more generalized process shaping Los Angeles rather than the obverse (i.e., a generalized process with specific manifestation).

The cognitive aspects of differentiation, its structuration, and the real and perceived and imagined and transcended boundaries that are reflected in the social topography of Los Angeles have a fundamental concern with culture, "as a state that which is cultivated" and as "the process of cultivating" (Bourdieu, 1984, p. 11), which as review of the empirical literature above tells us is fundamentally concerned with processes of gentrification. Jim Morrison in Venice in the early 1960s or the Arroyo Culture in northeast LA represent confluences of the appropriation of capital on the far left of Bourdieu's social grid (high cultural, low economic capital) and access to the aesthetic disposition of the dominant class (through education and/or a general *distance from necessity*; Bourdieu, 1984) that is in turn transposed to the manifestation of that position in urban space (i.e., affordable dwellings in neighborhoods that possess an authenticity, in historic architecture, in racial/ethnic and class composition, etc.; Cameron & Coaffee, 2005). Individuals in adjacent class positions with related aesthetic dispositions to artists—architects, professors, journalists, etc.—occupy similar geographies in the city and the trajectory of a neighborhood like Venice can over time transition diagonally across the social space represented in Figure 3 from the lower top-left (high cultural capital, low economic capital, low(er) volume) to the upper top-right (low(er) cultural capital, high(er) economic capital, high volume) as its aesthetic value becomes more and more commodified (Ley, 2003). But is the process under examination concerned with Venice, a physical space traversing the social grid, or culture, a social grid traversing physical space? And does that distinction matter?

Pinçon-Charlot and Pinçon (2018) respond in a sense, expressing that "urban space is always a projection of the cleavages of society onto the city and its neighborhoods" (p. 120). While not a terribly revelatory position, I follow their logic in putting theoretical precedence on broader social processes rather than localized place-based interactions; gentrification is but one of many complex products of a global network of interrelated socio-spatial practices driving contemporary restructuring of Los Angeles, but also one that deftly captures the often imperceptible countours of the human-environment dialectic. As noted in the vignette in the introduction, what is the atmospheric countenance of Abbot Kinney if not for a mutual comprehension of the people shuffling under its tunnel of palms with lattes, shopping bags, and structured and structuring perceptive schemata? Gentrification would simply emerge as an empirical quirk "unless...understood as the manifestation of...wider processes of intensified social competition..." (Wyly, 2019, p. 15), with the important addendum that transnational economic flows and regulatory policy fuels class struggle at multiple scales (Wyly, 2019). Indeed, influencing the calculus of objective probabilities that govern practices of gentrifiers and the displaced, alike, is a vast administrative scaffolding that permits widespread dispossession, racial reordering (Akers & Seymour, 2018), and statesanctioned violence (Addie & Fraser, 2019). Together, gentrification and contemporary manifestations of habitus and boundary-making processes are byproducts of a globalized world in which culture operates as a resource, its substance diminished as "the usefulness of the claim to difference as a warrant gains legitimacy" (Yúdice, 2003, p. 23) in social, political, and economic relations. We see, then, how cultural capital has emerged as an indivisible organizing principle of the twenty-first century city, perhaps usurping the centrality of physical, human, and social capital of prior decades (Yúdice, 2003). How and where do we find it in Los Angeles?

Postscript: Why Field of Study?

Scott's (2019) analysis of residential adjustment spurred by the growth of the *knowledge-intensive* economy in Los Angeles emphasizes the role of white-collar workers, whose "tastes and preferences...can never be simply taken to be exogenous to social reality" (p. 524) and align with workforce demands that require a close geographic proximity to the new economic centers of the city. For Scott (2019), though, the impetus for shifting residential patterns in LA is not the tastes and preferences of the individuals themselves, but rather the preceding agglomeration of jobs in tech, information, and media. Earlier empirical research has documented that

localized residential mobility is in fact directly correlated with cultural capital as measured by high school arts participation (Pettit, 1999), however, evoking the deficiencies of aforementioned macroeconomic explanations that account for stratification between regions, but are less attuned to differences within. I argue that *horizontal-boundary drawing mechanisms* (Lizardo & Skiles, 2012)—mediated through habitus and the aesthetic disposition—undergirding cultural proclivities at multiple scales in present-day Los Angeles are primary drivers of localized residential patterns that can be deduced from lateral variation in educational attainment.

Working backwards from Scott's (2019) analysis, we might consider how people are employed in *knowledge-intensive* or creative jobs in the first place. Koppman (2016) documented that cultural matching occurs in creative occupations via signaling of omnivorous tastes tied to prior socialization and cultural capital, echoing Lizardo and Skiles (2012) conceptualization of the horizontal distinctions drawn between those in the dominant class. Ad agencies sift through aspiring creative directors not by relying on vertical mechanisms, i.e., bachelor's-degree-required, MBA desired, but by using classification techniques that allow for assessing one's prolonged engagement with and continued mastery of the preferred aesthetic disposition (Lizardo & Skiles, 2012). Though occupational history can certainly speak to those cultural qualifications, a more longitudinal appraisal of an individual's creative sense, one that displays a concerted cultivation (Lareau, 2003), inevitably draws on education. In evaluating prospective employees, one advertising executive derided advertising majors as too pragmatic, instead expressing desire for the the "diversity of knowledge and also a quest for knowledge" (Koppman, 2016, p. 302) exhibited by applicants who majored in humanities and social science fields. As Bourdieu and Passeron (1977) explain, such traits are not "proof of the intrinsic, irreducible efficacy" (p. 83) of humanities or arts education, but rather a function of intersecting social forces and the objective possibilities of the

educational system at a given time. It follows that academic field of study, as a social category and empirical unit of analysis, is more attuned to the diachronic nature of urban restructuring, capturing both "elements in a structure and *moments in a process*" (my emphasis; Bourdieu & Passeron, 1977, p. 87) contra the occupational hierarchy that might more closely resemble a snapshot of elements at one moment in time.

Mapping the distribution of various fields of study onto the physical grid of Los Angeles, then, more squarely locates cultural distinction and its reproduction in the contemporary city than other horizontal typologies like occupations or vertical dimensions like aggregate educational attainment. Indeed, I argue that doing so offers an empirical effort aimed at illuminating Richer's (2015) idea of social topography in Los Angeles, leveraging the lateral dimensions of status inequalities in urban space to explain its ever fluctuating social, economic, and physical structure. Gentrification serves as a neatly categorizable process that allows us to begin to explore the more active manifestations of horizontal stratification in the city, from which inferences about adjacent forms of restructuring that are nonetheless beyond the scope of this project can be discussed (e.g., higher education costs, immigration enforcement, school segregation, political contestations, etc.).

Chapter 4: Methods

Wacquant (1998) outlines three methodological principles characteristic of Bourdieu's sociology, beginning with an embrace of: 1) "methodological polytheism" (p. 5)—or, the commonly avowed use of methods that best respond to the articulated research questions—2) "equal epistemic attention to all operations" (p. 5)—a dedication to the conceptual coherence of methodological strategy from data collection to estimation and interpretation of results—and 3) "methodological reflexivity" (p. 5)—a deliberate skepticism of method that demands persistent attention to the *theory-verification* dialectic throughout the research process. Certainly unable to meet the scope, sophistication, and inventiveness of Bourdieu's research, the above doctrine nonetheless provides an aspirational guide for the analytical plan of this study. In this section, I outline data, variables, and an estimation strategy used in responding to formally articulated research questions and other hypotheticals posed throughout the previous sections.

Data

Data for neighborhood-level analyses come from the US Census Bureau American Community Survey (ACS) 5-year estimates from 2013-2017 and geospatial data are TIGER/Line shapefiles from the US Census for 2015. The midpoint of the 5-year estimates is 2015, thus capturing data for the same year as the gentrification variable described below. Data for what I refer to as *commercial characteristics* come from the National Neighborhood Data Archive for the year 2015. As mentioned, the site of analysis is Los Angeles County, California, which encompasses independent cities like Inglewood, West Hollywood, and Glendale that are surrounded by the city of Los Angeles, but are nonetheless central to its urban fabric. Within the study area are N = 2,346 total census tracts, of which n = 2,326 had stable populations for the time period analyzed.

A second source of data are administrative records from a community college in Los Angeles County. Located 10 miles northeast of downtown LA, Freeway Community College (FCC, a pseudonym) enrolls over 20,000 students annually across a wide array of associate's degree, certificate, and non-degree programs. The college has no on-campus housing facilities, though its central location and reputation draw students from throughout Southern California. Figure 4 shows the spatial distribution of FCC students who first enrolled in Fall 2015, with large concentrations across northeast LA. Course enrollment records and demographic data from academic year 2015-2016 for first-time students from Los Angeles County are used for analysis of studentlevel residential patterns. Student home addresses were geocoded and matched to census tract data from TIGER/Line shapefiles from the US Census for 2015. Gentrification variables come from the UC Berkeley Urban Displacement Project, which is based on Decennial Census and American Community Survey data from 2000 and 2013-2017, respectively. Variables are described in more detail below.

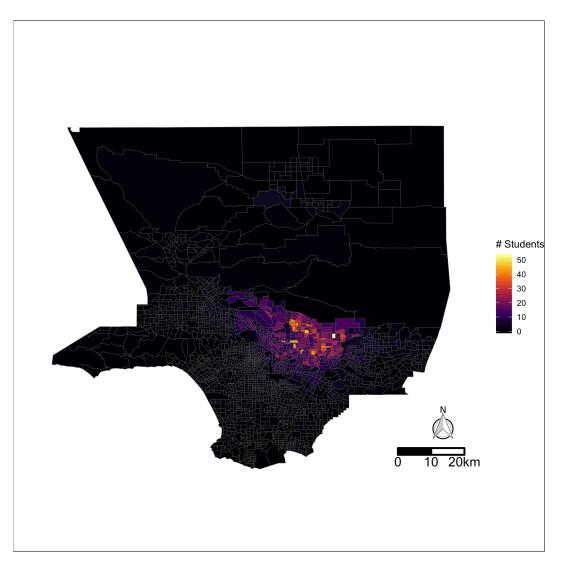


Figure 4.1: Geographic Distribution of FCC Students, Fall 2015

Variables

Field of study is the animating variable in this study, employed in its divergent forms at multiple scales as a window into the horizontal boundaries that divide and unite Angelenos and their spatial expressions in the city. In addition to mapping agglomerations of arts, business, education, and science students—former and current—across Los Angeles County, I explore associations that speak to more active processes of restructuring. Gentrification, specifically, serves as a primary dependent variable of interest, but I first explore relationships between field of study and neighborhood-level demographic patterns to show that, what are more often classified as vertical stratification dynamics, can also be explained by lateral mechanisms of differentiation. Below I describe dependent and independent variables used in regression models that are estimated in that endeavor.

Exploring Los Angeles in Numbers

Though scholars have made admirable efforts attempting to capture the ephemeral geography of Southern California, even the most detailed ethnographic data would surely fall short of capturing the idiosyncrasies and varied lived experiences of LA's hundreds of residential neighborhoods. Nevertheless, there exist a large amount of data touching on a wide range of demographic characteristics that provide at the very least a statistical summary of the county at a snapshot in time, and for this analysis, points from which neighborhood variance and field of study clusters are explored. At the census tract-level, demographic characteristics analyzed from the ACS are total population, five broad race categories, median age, and percent of residents born outside of the US. Macroeconomic characteristics of neighborhoods are captured in median income, unemployment, in-migration, and poverty variables, while educational variables are field of study percentages, along with proportion of neighborhood residents who are students enrolled in K-12 public schools and college students. I assess surface-level housing attributes of LA's over 2,300 census tracts with total housing units, gross rent, proportion of renters, median age of neighborhood buildings, and proportions of residents with commuting times over 1 hour and proportion who commute using public transit. The latter speak to the home-work relationship that is often the focus of residential adjustment in the city (Scott, 2019). Likewise, I quantify the commercial promise of neighborhoods with data on proximate restaurants, bars, coffee shops, food stores, and various recreation venues. Table 1 lists variables and summary statistics.

Dependent Variable - Gentrification at the Neighborhood and Individual Levels

At the neighborhood level, I employ a binary indicator of whether census tract i is gentrifying (=1, 0 else), which comes from the UC Berkeley Urban Displacement Project's definition². The gentrifying period is 2000 to 2015, with gentrifying census tracts classified as those where: 1) increases in the percentage of total residents with bachelor's degrees in tract i from 2000 to 2015 was greater than the median for LA; 2) increases in the median household income in tract ifrom 2000 to 2015 was greater than the median for LA; 3) increases in the median gross rent in tract i was greater than the LA County median from 2000 to 2015; 4) change in the non-Hispanic White population in tract i was greater than the LA median from 2000 to 2015. Figure 4.2 shows a map of gentrifying census tracts in LA County, totaling 88 individual neighborhoods. The dependent variable at the student level is a binary indicator of whether students home addresses are in gentrifying census tracts (=1, 0 else), defined in the same manner outlined above.

²For detail, see https://www.urbandisplacement.org/map/socal

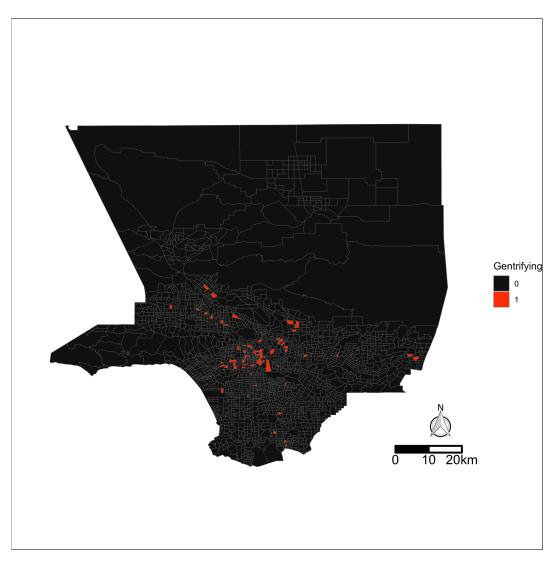


Figure 4.2: Gentrifying Census Tracts in LA County, 2000-2015

Independent Variables - Neighborhood-Level Residential Patterns

Independent variables of interest are the proportion of degree holders in 2015 in each of seven fields—sciences (life sciences, physical sciences, and related), computer science/engineering, social sciences/psychology, liberal arts/humanities, visual arts/communications, business, and education³—as a function of total population in census tract *i*. For the analysis of gentrification at the neighborhood level, the field of study variables are used as predictor variables in a logit

 $^{^3}For a complete list of degree fields that makeup each category and all other ACS variables, see <code>https://www2.census.gov/programs-surveys/acs/tech_docs/code_lists/2017_ACS_Code_Lists.pdf</code>.$

model with relevant controls listed in Table 5.2.

Independent Variables - Student-Level Residential Patterns

Mimicking the neighborhood level analysis, student course-taking is observed in each of seven fields—sciences (life sciences, physical sciences, and related), computer science/engineering, social sciences/psychology, liberal arts/humanities, visual arts/communications, business, and education—as total courses for subjects in those seven fields that were taken by student *i* during the 2015-2016 academic year. Those variables are included in a logit model along with relevant individual-level demographic and academic controls associated with course selection: race, age, gender, part-time/full-time status, financial aid status, and major.

Analysis and Estimation Strategy

Below I outline a number of complimentary spatial analysis techniques used to respond to research questions, formally articulated and otherwise tangential to the broader social processes under investigation. I first outline how I handle spatial autocorrelation among both dependent and independent variables used in analysis using *Moran's I*, before explaining how I leverage its localized parameter to identify field of study clusters to that provide a bird's eye view of the interlocking and overlapping horizontal boundaries restructuring neighborhoods within the city. Next, I describe the use of geographically weighted regression models to show how those field of study variables relate to economic indicators commonly associated with vertical aspects of inequality and how those relationships diverge across the 12,310 square kilometers of Los Angeles County. I finally define a series of logit models used to model relationships between field of study and gentrification at the student and neighborhood-levels. Dependent variables under investigation are included in parentheses in headers.

Spatial Autocorrelation at the Neighborhood Level

Variables are said to be spatially dependent or exhibit spatial autocorrelation when the outcome under investigation at a focal unit is correlated with the weighted average of spatially proximate units (see Figure 6). I predict spatial dependence in one or more variables captured at the neighborhood level, and as such, first define a Euclidean distance-based weights matrix that appropriately characterizes the structure of the relationship between LA neighborhoods. Radial distance and *k*-nearest-neighbor (*k*-NN) weighting procedures are popular in analyses where the spatial entity is irregularly located on a grid like census tracts in urban areas (Bivand, 2019), where tracts are represented by polygon centroids weighted by total area of the tract. The weights matrix used to test the hypothesis of spatial dependence, W, as such, is a positive $n \times n$ matrix where each row by column element, w_{ij} , represents the strength of a spatial relationship between neighboring census tracts *i* and *j*, with diagonals of 0. An iterative process, I use *k*-NN weights that maximize the Moran's *I* statistic (*k*-NN= 3; Getis & Aldstadt, 2004). I then test for spatial dependence in each independent variable by conducting a global Moran's *I* test:

$$I = \frac{n}{\sum_{ij} w_{ij}} \frac{\sum_{ij} w_{ij} (y_i - \overline{y})(y_j - \overline{y})}{\sum_i (y_i - \overline{y})^2}$$
(1)

where *n* is the total number of census tracts, \overline{y} is the mean of a given variable, y_i is variable estimate at a focal census tract, y_j is the variable estimate in all other tracts, and w_{ij} is a fixed *k*-NN spatial weight between tract *i* and *j*. Here, *I* is a measure of the divergence of a tract's variable estimate in 2015, weighted as outlined above, from that of the global mean across study area (i.e., LA County). Ranging between -1 and 1, a Moran's *I* statistic that fails to reject the null hypothesis of no spatial autocorrelation suggests that the variable in question is randomly dispersed. Positive spatial autocorrelation, as determined from a positive Moran's *I* statistic, suggests that the variable in question is dependent on those in the surrounding *k*-NN region. A *global* test, results point to the presence of spatial dependence in variables across LA. Positive results for field of study variables point to the value of decomposing global Moran's *I* statistics to analyze residential patterns (clustering), as well as diagnostics for the predictive model outlined below.

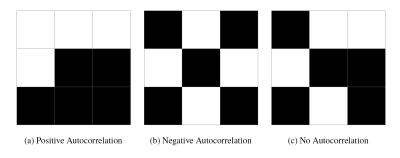


Figure 4.3: Types of Spatial Autocorrelation

Local Moran's I_i

Tests yielded positive, significant global Moran's I values, and as such, I use a local indicator of spatial association—the Local Moran's I_i statistic—to identify hot spots (areas of high values surrounded by areas of high values of a given variable; HH), cold spots (low-low; LL), and outliers (high-low, low-high; HL, LH). Formally, I_i can be expressed as:

$$I_i = z_i \sum_{j=1, j \neq i}^n [w_{ij} z_j] \tag{2}$$

where z_i and z_j are deviations from the mean of a given variable among all other census tracts in the *i*th and *j*th neighboring census tracts, w_{ij} are *k*-NN weights outlined above, and summation over *j* consist only of observations within a *k*-NN neighborhood. A positive I_i value indicates that a single census tract is surrounded by similar tracts with respect to a given variable and thus a potentially significant cluster amid the global (city-wide) study sample, i.e., high values surrounded by high values (hot spots), low values surrounded by low values or *cold spots*, and outliers (Anselin, 1995). Statistically significant pseudo-*p* values are derived from Monte Carlo simulations and are corrected for multiple testing using the false discovery rate procedure (Caldas de Castro & Singer, 2006). Interpretation is aided by aggregating clusters (HH, LL, HL, LH, not significant) for each field of study analyzed and comparing demographic averages within LA. Appendix A contains more information related to spatial autocorrelation and the weights matrix used in analysis.

Logit Models - Correlations with Gentrification

To assess the relationship between field of study variables and whether a census tract *i* is gentrifying, I use a binary logit model and a spatial filtering technique commonly used in ecology research that is based on inclusion of Moran eigenvectors to minimize autocorrelation in the residuals of the model:

$$log\left(\frac{\pi_i}{1-\pi_i}\right) = x_i \prime \beta + E_i \gamma \tag{3}$$

where π_i is the probability that census tract *i* is gentrifying, x_i is 1 by *k* parameter vector of proportional field-of-study variables, controls, and a constant term for census tract *i*, E_i is a vector of eigenvector loadings (Wang, Kockelman & Wang, 2013), and γ and β are vectors of *k* regression parameters. E_i is obtained from a matrix Ω :

$$\Omega = (\mathbf{I} - 1 \cdot 1'/n) \mathbf{C} (\mathbf{I} - 1 \cdot 1'/n)$$
(4)

where I is an $n \times n$ identity matrix, C is the same $n \times n$ k-NN spatial weights matrix as defined for Moran's I and I_i calculations above, 1 is a $n \times 1$ vector of 1s, and n is total census tracts analyzed. As such, the possible values of global Moran's I across a study space are simply normalized eigenvalues (denoted λ_n) of Ω (Chun & Griffith, 2011; Wang, Kockelman & Wang, 2013). λ_1 , then, is the largest eigenvalue capturing positive spatial dependence and λ_n is the smallest capturing negative autocorrelation, such that corresponding eigenvectors are $n \times 1$ vectors of real numbers iteratively computed and orthogonal and uncorrelated with the previous vector (e.g., E_1 identify the largest positive spatial autocorrelation patterns in the county, that when visualized appear like panel a in Figure 4.3, which then decreases for each additional vector, E_n ; Griffith, 2003; Patuelli et al., 2011). Rather than including all eigenvectors, the computed eigenvectors, E_n , are regressed on the dependent variable of interest and only those meeting a significance threshold, in this case $\alpha < .05$, are used to determine inclusion as a spatial filter vector, E_i , in the final regression model (Equation 3). Reduction of autocorrelation stemming from any included covariates through spatial filtering will yield more efficient logit estimates (Griffith & Peres-Neto, 2006) and thus more confidence in model predictions and conclusions.

At the student level, the model is similar, though absent of significant spatial dependence (i.e., students course-taking behaviors are not dependent on those of their geographic neighbors). I thus use a binary logit model:

$$log\left(\frac{\pi_i}{1-\pi_i}\right) = x_i \prime \beta \tag{5}$$

where π_i is the probability that a student *i* lives in a gentrifying census tract, x_i is 1 by *k* parameter vector of course-taking variables, demographic controls, and a constant term for student *i*.

Limitations

This study is not without methodological limitations, as the nature of the data is inherently limited in scope and scale. On the one hand, Los Angeles is a unique urban mega-region with few parallels in the world; generalizations from this analysis are surely conditional at best. To that end, I bound the study's analytical frontier using the administrative borders of Los Angeles County, an imperfect definition of the LA metropolitan area, whose residents and influence extend far into the desert to the massive Inland Empire and along the hundreds of miles of coastlines from Santa Barbara to San Diego. As it is (and perhaps, ironically), this study is limited by classifications that, if less encumbered by researcher-imposed design, would present interesting topics of scholarly attention. A deeper analysis of the educational dynamics of the suburban/urban divide in Los Angeles County, for example, might illuminate variations in social topography-especially on either end of the dichotomy-from which insights into patterns of inequality could be gained. Likewise, there are dozens of other cities like and unlike Los Angeles across the globe that demand investigation of horizontal stratification patterns. Future designs might take a comparative approach, not only looking at field of study agglomerations within cities, but also between cities and with diverse methodological approaches. Nevertheless, I seek to address any limitations here in the presentation of results, primarily with dozens of visual representations, in order to bring closer to the surface the structures that govern life in Southern California. More analytically, detailed appendices at the end of this dissertation also address a host of points that might arise from the methodological choices described above.

A significant data limitation is also notable and perhaps more salient to the contemporary period where *social distance* has entered the lexicon of everyday life. It goes without saying that the residential behaviors of Angelenos are in some way dependent on social networks and social capital—whether it's a lead from a friend on an apartment in West Hollywood, moving closer to family in the Valley, or having nobody to turn to when faced with eviction. An idealized version of this analysis would control for individuals, or even neighborhood levels of social connect-edness, a challenging, but not insurmountable task that is nonetheless out of the scope of the present study. Another approach might incorporate qualitative interviews to parse the influence of friends, families, roommates, and/or lack thereof, of residential choices in LA and how such networks reflect the broader cultural scaffolds within which those choices are made.

There are also limits to the analysis of gentrification, both methodologically and in practical terms. With respect to regression models in this study, there could be an impulse to attribute causality to credentialed residents and students on neighborhood change or, conversely, gentrification on the latter's residential behaviors. As outlined above, though, logit models are designed to serve a purely correlational function, results from which can nonetheless be used to simulate interesting counterfactual scenarios by varying different neighborhood features (as is presented in results). Select model diagnostics are outlined in appendices along with appropriate statistics detailed in-text, but are not intended to be exhaustive of statistical minutiae and econometric quirks of a more technical analysis. As it is, I certainly encourage scrutiny of gentrification models and development of more sophisticated techniques building on (or in conflict with) the design outlined here.

Finally, a note on topical limitations seems appropriate, given both the unending layers of social geography with which one might analyze Los Angeles and the cataclysmic shift in life and consciousness brought on by the COVID-19 pandemic. Spatial disparities in chronic health conditions and access to health care among county residents, for example, are certainly variables that

field of study clusters could shed light on; so too are theories that foreground particular aspects of individual identity or political economy that would no doubt add nuance to the findings. On the question of data, unhoused individuals are surely absent or undercounted in Census reports, an empirical blindspot that papers over the many humanitarian challenges of real life in the city. These limitations in research design are not unique to this dissertation, but perhaps more obvious given the dramatic, nearly universal changes to the social geography of LA after March 2020. In spite of this, I believe the results reported in Chapter 5 are uncommon in the research literature and thus offer novel empirical markers to further investigate the socio-spatial dynamics of Los Angeles and cities like it well into the twenty-first century.

Chapter 5: Findings

The following chapter reports results from the design outlined in Chapter 4. I first quantify the social geography of Los Angeles County in 2015 through exploration of a host of neighborhood survey data points, which are then used to contextualize results of local Moran's I_i tests for each of seven fields of study. Prior to doing so, I discuss spatial autocorrelation at the neighborhood level. Finally, I report and interpret estimates from neighborhood and student-level logit models for gentrification and living in a gentrified neighborhood, respectively.

A Survey of Los Angeles in 2015

Inexhaustible theoretical and empirical analysis on Los Angeles would point away from identifying a *typical* neighborhood among its 2,000-plus census tracts and in that sense, Census data simply provide a fulcrum for measuring divergence and identifying patterns within the urban area's vast patchwork of residential enclaves, commercial corridors, corporate and educational campuses, skyscrapers, freeways, and interstitial space. As such, presented in Table 5.1 are summary statistics that provide a necessary yardstick with which to measure variation, patterns, and correlational findings in this chapter. Importantly, these data reflect LA in the year 2015, which also speaks to the inherently historical nature of studying such a dynamic socio-spatial environment.

Variable	n	Min	x	Max	s
Educational Characteristics					
% K-12 Students	2326	0.00	16.21	51.28	5.64
% College Students	2326	0.00	7.19	100.00	6.83
% Bachelors Degree	2326	0.00	22.94	78.25	17.81
% Social Sciences Degree	2326	0.00	3.68	20.96	3.55
% Engineering/CS Degree	2326	0.00	2.70	16.70	2.55
% Sciences Degree	2326	0.00	3.67	33.33	3.17
% Humanities Degree	2326	0.00	2.73	17.54	2.75
% Visual Arts/Communications Degree	2326	0.00	3.60	28.84	4.45

% Education Degree	2326	0.00	1.35	10.26	1.12
% Business Degree	2326	0.00	4.16	33.33	3.38
Demographic Characteristics	2520	0.00	1.10	55.55	5.50
Total Population	2346	0.00	4307.64	12653.00	1568.59
% American Indian/Alaska Native	2326	0.00	0.75	100.00	3.13
% Asian	2326	0.00	14.34	89.12	15.84
% Black	2326	0.00	8.06	87.75	12.52
% Latino	2326	0.00	47.87	100.00	28.94
% White	2326	0.00	52.05	95.86	20.51
% Born Outside US	2326	0.00	34.44	75.66	13.59
Median Age	2324	17.60	36.84	65.40	6.59
Economic Characteristics					
% Below Poverty Line	2326	0.00	5.04	33.32	4.96
Median Income (\$)	2320	2,499.00	30,499.73	108,214.00	14,508.34
% Unemployed	2326	0.00	4.04	20.00	1.83
Gini Index	2314	0.16	0.43	0.72	0.06
% In-Migration Previous Year	2326	0.00	1.79	30.83	2.38
Housing Characteristics					
Total Housing Units	2331	0.00	118.48	269.00	31.59
Median Year Structures Built	2280	1939.00	1961.51	2013.00	13.13
% Renters	2326	0.00	50.85	100.00	25.70
Gross Rent (\$)	2298	306.00	1478.99	3501.00	498.94
% Commute Using Public Transit	2326	0.00	3.10	38.21	3.68
% Commute \geq 1 Hour	2326	0.00	5.93	25.83	2.73
Commercial Characteristics					
Total Bars	2346	0.00	0.76	24.00	1.47
Total Restaurants	2346	0.00	7.94	139.00	9.95
Total Coffee Shops	2346	0.00	0.90	15.00	1.69
Total Grocery Stores	2344	0.00	2.39	33.00	2.39
Total Clothing Stores	2344	0.00	6.36	970.00	27.40
Total Specialty Food Stores	2344	0.00	1.06	81.00	2.37
Total Museums	2344	0.00	0.40	14.00	1.02
Total Artistic Groups	2344	0.00	2.22	99.00	4.98
Total Sports Stadiums	2344	0.00	0.19	8.00	0.53
Total Libraries	2344	0.00	0.26	7.00	0.64
Total Golf Courses/Country Clubs	2344	0.00	0.06	3.00	0.28

 Table 5.1: Characteristics of Los Angeles Neighborhoods, 2015

Educational Characteristics

I begin exploring LA's diverse social landscape with the educational composition of more than 2,000 Census Bureau-defined neighborhoods. Though higher education attainment is the focus of this study, K-12 students comprise a larger percentage of the average county neighborhood than do college students, at over 16 percent. Students at the scores of county higher education institutions make up just 7.2 percent of the average neighborhood, though encompass 100 percent of residents in tracts zoned for the campuses of UCLA and USC. A similarly wide range characterizes bachelor's degree holders in Los Angeles neighborhoods, averaging less than a quarter of total residents countywide, but comprising three times as much in some areas. Looking horizontally, it should come as no surprise that arts/communications and business degree holders form a combined 8 percent of those with four-year degrees in city neighborhoods, followed by individuals with degrees in the social sciences and life/physical sciences at around 3 percent each. Education degrees, a hallmark of institutions in the California State University system, can be found among a little over one percent of denizens in the average LA neighborhood. Schooling is just one institutional pillar that unites and separates the geographic spaces of the county, however, famously one of the most diverse urban regions in the United States.

Demographic Characteristics

The geography of Los Angeles is as polarizing as any region in the world, where on clear winter days one might catch a glimpse of the snow capped Mount Baldy from the beaches of Santa Monica, where an east-west traversal of Sunset Boulevard takes motorists from Chinatown to Thai Town to Beverly Hills, where gleaming luxury hotels and office buildings downtown cast shadows onto the largest encampment of unhoused people in the country. Not unlike New York City, Chicago, and other large American cities, racial/ethnic diversity is at the forefront of spatial divisions that shape the daily experiences of LA County residents. Notably, as shown in Table 5.1, however, averages that might suggest a harmonious variegation—52 percent White, 47 percent Latino, 14 percent Asian, 8 percent Black, and less than 1 percent American Indian—are qualified by extremes that reveal overwhelmingly segregated tracts along five broad race/ethnicity categories. Likewise, immigrants have long been touted as essential to and welcomed by Los Angeles, which is surely reflected in a mean of over 34 percent foreign-born residents in neighborhoods

across the county. At the extremes, though, we see a similar segregation as that for race—for example, a neighborhood east of Koreatown in the center of the county (Census tract 2122.03) has a population nearly three-quarters of whom are foreign-born, while the north end of Hermosa Beach (Census tract 6210.04) has a similarly-sized population that is made up of less than 9 percent immigrants. Average median age for LA County neighborhoods is unremarkable at around 37, just one year below the national median in 2018. The wide-rage of racial/ethnic disparities, however, demand further inquiry and suggest the existence of additional layers of classification of the metro's residential neighborhoods.

Economic Characteristics

Economic disparities are no less salient to the region's stratification despite this study's focus on the social and cultural differentiation of LA County neighborhoods. As Peck (2005) deduced from Florida's creative city concept that urban residents either *have it or not* with respect to the creative aesthetic valued by liberal policymakers and urban planners, as much can be said of the economic realities of many Los Angeles neighborhoods. Of course, in the same manner, decades of segregation and racist policymaking and planning has bolstered the financial fortunes of areas like West LA and more recently, downtown and gentrified northeast neighborhoods, at the expense of communities to the south and east. Income inequality in LA County is especially pronounced with an average neighborhood Gini Index of 0.43⁴, which as historical trends reveal has steadily increased since the 1970s (Kane & Hipp, 2019). Reflected in the Gini Index are neighborhood median income figures, at once flat for lower earners and growing for high earners, resulting in somewhat dramatic disparities in neighborhood averages sometimes bisected by just

⁴Importantly, separate LA County and LA City indices measured against other counties and cities are higher than the aggregated tract mean in ACS data.

four lanes of traffic. In the tony West LA enclave of Brentwood, for example, median incomes north of San Vicente Boulevard—a neighborhood infamously once home to OJ Simpson's mansion on Rockingham Drive—are \$91,491, while the neighborhood south of San Vicente (Census tract 2643.02)—characterized by multifamily dwellings filled with students and young families is almost half that at \$52,131. While a degree of fuzziness is induced by the somewhat arbitrary nature of census tract boundaries, an at least superficial understanding of the city's complexity is reflected in the housing dynamics on either side of San Vicente and beyond, a pattern undoubtedly reproduced in post-industrial cities across the world.

Housing Characteristics

Though historically not in the same conversation as geographically more compact San Francisco and Manhattan, housing costs in Los Angeles have risen dramatically over the last decade. That trend is born out in Census data from 2015, with a mean gross rent of \$1,479 per month for LA County neighborhoods and topping out at over \$3,500 per month in a handful of posh enclaves like Calabasas (Census tract 8002.02). Not captured in American Community Survey data, but nonetheless imperative to any discussion of housing in the city, are the more than 65,000 unhoused Angelenos (Oreskes, 2020) for whom \$1,400 in monthly rent is unfeasible amid flat wages and political stagnation.

Indeed, despite a seemingly infinite supply of cookie cutter homes tucked into the hills of the San Fernando Valley and elsewhere across 4,000-square miles of LA County, the fate of shelter for a majority of the region's residents rests with landlords. Unlike other high renting areas like San Francisco and New York, though, Angelenos—even the renters—mostly use personal vehicles to commute to work. In fact, the average neighborhood has a larger percentage of residents with commutes over 1 hour (5.9 percent) than it has commuters who commute on public transit (3.1 percent). Though those categories are not mutually exclusive, inadequate subway and commuter train services in large swaths of the region suggest that most commuters are sitting in traffic on sunny Los Angeles mornings, whether they are behind the wheel of a Tesla or packed like sardines on an express bus. The polycentricity of Los Angeles is perhaps most visible in these extremes of housing data reported in Table 5.1, where the median age of structures span 80 years and where some neighborhoods have public transit behaviors that rival New York and others are full of subcompact sport utility vehicles. Of course the boulevards and freeways that traverse the region are more than for just commuting, as the city's varied patterns of commercial amenities indicate.

Commercial Characteristics

The American Community Survey provides valuable insight into the socioeconomic diversity of Los Angeles, but missing are the characteristics of neighborhoods that often drive demand-side conditions of neighborhood change. Fortunately, researchers have compiled Economic Census data into the National Neighborhood Data Archive (NNDA), which allows us to delve into consumption patterns of LA neighborhoods. Though pinpointing hot spots of Hollywood nightlife is more often achieved with review of fashionable magazine articles and social media accounts, NNDA data nonetheless confirm that a tiny tract (Census tract 1907.00) nestled between Hollywood Boulevard and the Sunset Strip is home to 24 bars, over 30 times as many as the countywide average. The geography of beverage consumption is no stranger to analysis of urban change (e.g., Hwang & Sampson, 2014), with new coffee shops often regarded as a harbinger of gentrification. Indeed, the more than 20 coffee shops located in two gentrified tracts around Downtown's Staples Center bolster such claims in Los Angeles. The similarly wellresearched topic of food deserts can shed light on the opposite extremes of LA County neighborhoods, where 480 tracts have no grocery store. Such a recounting of data can become spurious, though—museums and libraries are more plentiful than sports stadiums and country clubs in LA county—and each of the characteristics above are wanting of additional context that can clarify educational variegation in the region.

Field of Study Clusters

Below are results from local Moran's I tests that reveal statistically significant field of study clusters throughout Los Angeles County. Global Moran's I tests described in Chapter 4 were first conducted, revealing significant spatial autocorrelation across field of study variables. Nearneighbor matrices of k = 3 nearest neighbors were used in analysis, mirroring approaches that maximize the global Moran's I statistic (Lyke, 2018). Moran's I values for k = 3 and k = 5configurations are shown in Appendix A, as is the k = 3 near-neighbor weighting structure used in calculation of local Moran's I_i values and in spatial filtering algorithms used in neighborhoodlevel logit models.

First, I present maps that show the geography of each field of study, with areas of high numbers of degree holders in certain fields of study displayed in red and those with low numbers in orange. Maps provide a background for then identifying the characteristics of various field of study clusters, contextualized with maps of those characteristics, allowing for intra and intercluster comparisons discussed in the discussion section below. Appendix B lists full descriptive tables for field of study clusters examined. Maps are high resolution Portable Network Graphics generated using R, for which increasing the scale is recommended if reading this document as a PDF.

Arts and Communications Degrees

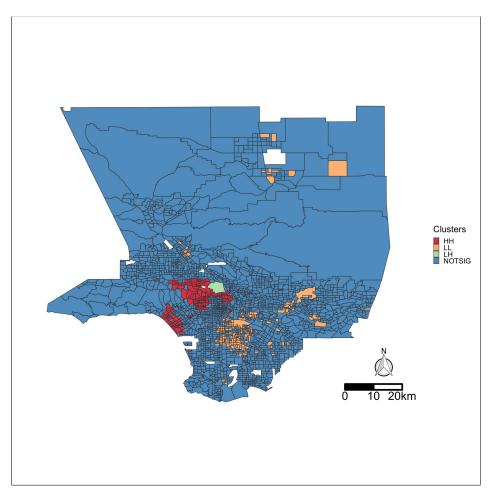


Figure 5.1: Arts and Communications Degrees Clusters, 2015

Perhaps unsurprising is the geography of arts degree hot spot clusters (HH), totaling 162 census tracts and stretching from Venice and Santa Monica at the western terminus to Hollywood, Burbank, and gentrified LA neighborhoods north of downtown such as Silver Lake and Los Feliz. At the other end of the spectrum are 201 cold spot clusters that encompass the far reaches of the county in the southeast and the Antelope Valley, well outside an hour-long commute to the city's main entertainment corridors. Just two outliers exist, a relatively uninhabited patch of land that is mostly Griffith Park and a slice of downtown home to Skid Row. All told, the clusters of arts and communication degree holders illuminate a pattern that fits with both popular perceptions and prior empirical evidence—creatives, so defined, inhabit LA neighborhoods at the real and imagined forefront of global capitalist culture and do so in proximity to related employment. A further breakdown below sheds light on how those patterns are socially and materially reproduced.

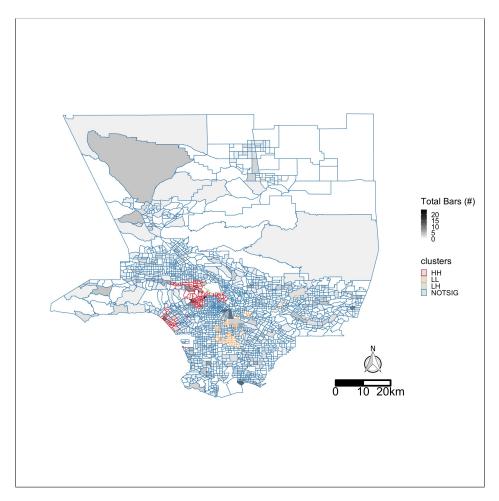


Figure 5.2: Spatial Distribution of Bars with Arts/Comm Clusters Overlaid

Though Venice was once home to a Black majority and Echo Park has long been an important node of Chicano culture in LA, the demographics of arts degree hot spots that envelope those communities are decidedly White. In fact, White residents make up nearly three quarters of the average arts degree hot spot, over 20 percent more than neighborhoods with non-significant populations of art degree holders. White residents comprise an even smaller proportion of arts degree cold spots, which are majority Latino. The economic divergence among hot and cold art degree clusters is similarly stark, with median income significantly higher in the average hot spot than in the average cold spot and poverty rates much lower in hot than in cold. Unemployment and Gini Index are slightly higher in art degree hot spots, however, suggesting perhaps lingering economic effects of gentrification, or even spillovers, in general regions around Venice and Silver Lake. The latter is also evoked in the significantly higher rate of in-migration in the average hot spot relative to cold spots and non-significant tracts.

Number of students, both college and K-12, are much higher in art degree cold spots than in hot, however. Indeed, bachelor's degree attainment is just a fraction of that in cold spots compared to other clusters and non-significant neighborhoods, a pattern discussed more in the next chapter. With respect to the variable at hand, art degree hot spots are found to have rates four times that of non-significant clusters.

Also higher in arts degree hot spots are the number of total housing units, with renters occupying hot spots at higher rates than in cold spots and non-significant clusters. Gross rent in hot spots, on the other hand, is higher in hots, while commuting proclivities are lower, pointing to the premium of living near places of employment. Denizens of arts degree hot spots also put a premium on neighborhood amenities, with the average number of bars, coffee shops, and restaurants—around 2, 2, and 15, respectively—far outpacing that of cold spots, non-significant clusters, and county averages. I have illustrated the number of bars overlaid with arts/communications clusters in Figure 5.2, a pattern previously documented in research on urban behaviors of the *creative class* (Lawton et al., 2013) and specifically cited as an acceptable expression of *neighborhood character* by LA city planners tasked with urban renewal (City of Los Angeles, 2014). Unsurpris-

ingly, the mean arts degree hot spot is home to one museum/gallery and nearly 9 artistic groups. The only parity between hot and cold spots of art degree holders exists for the number of grocery stores and golf courses. Followed are results for sciences degrees, from which both commonalties and variations emerge that recall prior research and theory discussed in Chapters 2 and 3, as well as new findings to be discussed later.

Sciences Degrees

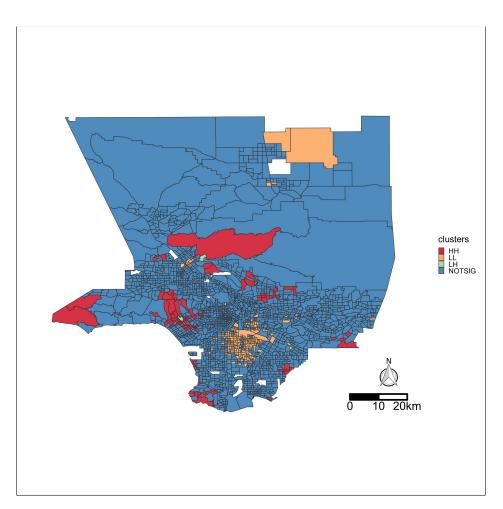


Figure 5.3: Sciences Degrees Clusters, 2015

The geographic pattern of 104 sciences degree hot spots differs clearly from that of arts degrees, encircling the urban core of Los Angeles on the western periphery in the San Fernando

Valley, the San Gabriel Valley in the east, and the tonier coastal neighborhoods of the South Bay not far from thousands of aerospace industry jobs in El Segundo and Hawthorne. Cold spots, numbering 212, are clustered in south Los Angeles, with a smattering in the Antelope Valley. A more detailed look reveals LA neighborhoods commonly associated with science and technology industries—La Cañada Flintridge, home of NASA's Jet Propulsion Laboratory, and El Segundo, home to aerospace hubs just south of LAX—as sciences degree hot spots. More than just industry, however, characteristics of sciences degree clusters reflect an array of clues about the urban form.

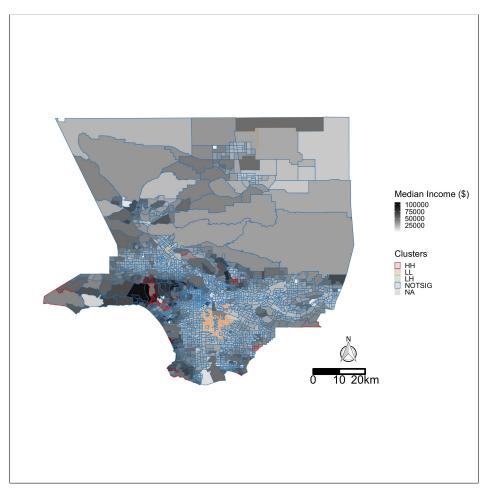


Figure 5.4: Spatial Distribution of Median Income with Sci. Clusters Overlaid

Sciences degree hot spots are more diverse overall than those for arts degrees, with Asian residents comprising over 20 percent compared to under 2 percent for sciences cold spots. Latino

and Black residents in hot spots make up well below the average composition of non-significant clusters, however, and White residents are still relatively overrepresented in hot spots on average. Economic characteristics of sciences degree clusters mirror those of arts degrees with the exception of unemployment rates, which in hot spots are below the citywide average at just 2.97 percent. Otherwise, a trend of economic disparities between hot spot and cold spots of degree clusters appears consistent across fields of study. I have chosen to illustrate median incomes across the county overlaid with sciences hotspots in Figure 5.4 in order to highlight consistent *horizontal* patterns of economic disadvantage reminiscent of vertical and/or longitudinal disparities commonly described in the neighborhood effects literature (Sharkey & Faber, 2014).

Educational demographics of sciences degree clusters are also similar to those for arts degrees, with relatively smaller proportions of K-12 and college students in hot spots, but much greater proportions of overall higher education attainment. Notably, sciences degree holders do not make up the plurality of residents in sciences degree hotspots, with social sciences and arts/communications—over 10 and over 9 percent, respectively, compared to less than 9 percent for sciences—each individually comprising larger percentages of residents. Like noteworthiness of the consistent economic disparities among hot spot and cold spots between fields of study, so too is the configuration of fields of study proportions within clusters for any one field of study. Housing characteristics in sciences degree clusters provide further detail as to the horizontal patterning of residents in LA County.

The stock of housing is plentiful and newer in the average sciences degree hot spot, though gross rent is over two standard deviations above the countywide mean at over \$2,100 per month. More sciences degree cold spot residents ride public transit to work and commute over 1 hour than in hot spots, pointing perhaps to transit deficiencies on the periphery of the LA urban core and/or the spatial proximity of degree-related jobs in hot spots. To that end, the average sciences degree hot spot offers more amenities like bars, restaurants, and clothing stores compared to other clusters and the countywide average, but still less than the highs of arts degree clusters. As noted, patterns begin to emerge among and across field of study clusters that at once engender the unique interpretations of neighborhoods that arise from constructing horizontal demarcations and also illuminate the rather chaotic process of categorization and boundary drawing in an urban megaregion like Los Angeles.

Social Sciences Degrees

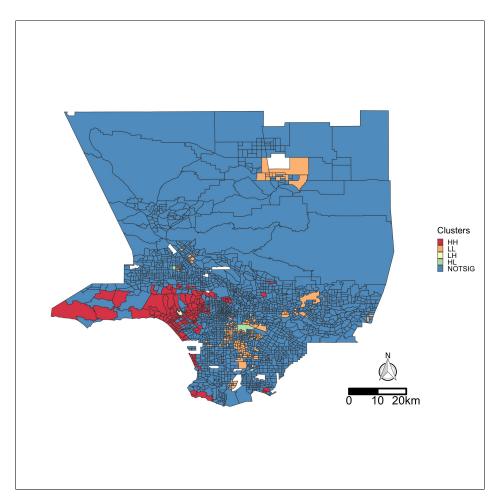


Figure 5.5: Social Sciences Degree Clusters, 2015

The beaches of Malibu most likely do not conjure an association with educational endeavors, though they certainly have and continue to inspire poets, artists, and filmmakers. It is perhaps the enigmatic quality of the Pacific Ocean that attracts social scientists to its shores, with 168 hot spots of social sciences degree holders stretching from Point Mugu and the canyons above Malibu down the Pacific Coast Highway towards LAX. More than the two previous fields of study, social science degree hot spots are clustered heavily on the westside of LA. Over 174 cold spots, on the other hand, are located in the now familiar areas of south Los Angeles and portions of the Antelope Valley. Notable outliers exist, as well, further displaying the unique classificatory power of degree holder proportions in LA County neighborhoods.

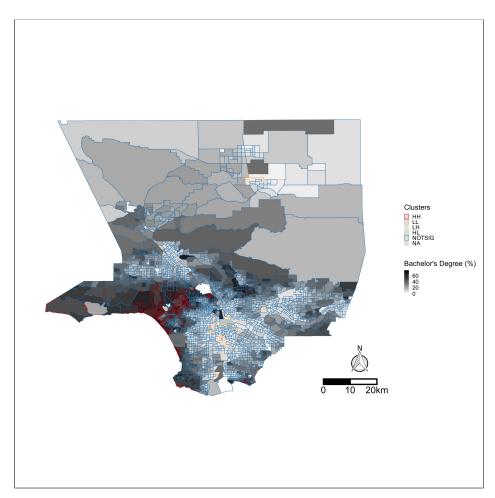


Figure 5.6: Spatial Distribution of Bachelor's Degree with Soc. Sci. Clusters Overlaid

Unsurprising is the racial/ethnic composition of social science degree clusters, with hot spots trending significantly whiter and older and the average cold spot containing largely younger, majority Latino populations. Worth noting are "HL" outliers, though, which represent neighborhoods with a relatively higher proportion of social science degree holders than their spatial location would otherwise indicate. The racial/ethnic diversity of these two HL outliers—located in the San Fernando Valley and at the far southeast edge of the county—point to interesting cases that might benefit from a closer qualitative analysis.

Economic disparities between social science degree hot spots and cold spots are particularly stark, with nearly \$40,000 separating median incomes in the average hot and cold neighborhoods. Likewise, a one percentage point gap exists between unemployment rates in hot spots and cold spots, with a 0.50 Gini Index reported for the average hot spot neighborhood. Income and Gini Index trends exist for the two previous reported fields of study clusters, pointing perhaps to the economic value of any bachelor's degree (i.e., effects of not having a degree are especially pronounced in areas where large clusters of credentialed individuals live).

To that end, there is around a 52 percent gap between the proportion of residents with bachelor's degrees in social science hot and cold spots. Visualized in Figure 5.6 is the spatial distribution of bachelor's degree holders as a proportion of individual census tracts overlaid with social science clusters, echoing prior research on the economic returns of degrees and the intersection of non-pecuniary benefits of attending college (Oreopoulos & Petronijevic, 2013). Data on median age and trends in the previous two sections are reflected in the unsurprising finding that hot spots have fewer K-12 and college students on average compared to other neighborhoods. Though still making up a conisderable 11 percent of residents in the average hot spot, arts/communications degree holders actually outnumber social science degree holders in those hot spots. As the continuity of cold spots has been revealed, the latter finding suggests a common habitus among some fields of study (i.e., Santa Monica neighborhoods are hot spots for both arts/communications degree holders and social science degree holders). Such overlap exists in housing characteristics of social science degree hot spots, with fewer hot spot residents commuting on public transit and paying higher rent than the countywide average. Also higher than countywide averages is the percentage of renters in social science degree hot spots and cold spots, though HL outliers have a significantly smaller proportion of renters. Those outliers also have far fewer restaurants, bars, boutiques, and coffee shops, however, again indicating a premium placed on not only proximity to work among those with bachelor's degrees, but also on the density of neighborhood amenities.

Engineering and Computer Science Degrees

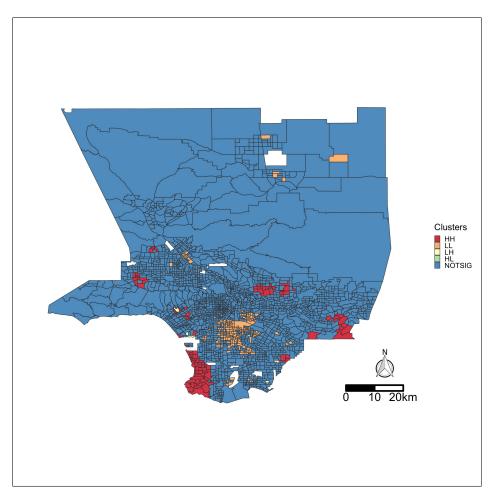


Figure 5.7: Engineering and Computer Science Degree Clusters, 2015

In some ways mirroring sciences hot spots, engineering and computer science degree (from now on, described as engineering for brevity) hot spots are located at the edges of LA county in all directions, though even further out than the inner ring of suburbs surrounding the urban core. Notable is the hot spot agglomeration on the Palos Verdes Peninsula in the southwest corner of the county, a wealthy coastal enclave situated within commuting distances of downtown Los Angeles, Santa Monica, Long Beach, Hawthorne, and Irvine in Orange County. In addition to Palos Verdes and a number of neighborhoods in the San Gabriel Valley, there is also a noticeable number of hot spots encircling the UCLA campus (itself a cold outlier given its student population) in west LA. Cold spots, adhering to trends with other fields of study, exist in large swaths of south LA and in the Antelope Valley.

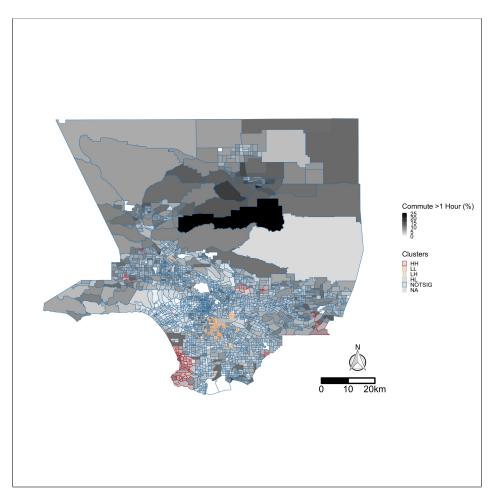


Figure 5.8: Spatial Distribution of 1 Hr+ Commutes with Eng./CS Clusters Overlaid

As the geography of engineering degree clustering indicates, hot spot neighborhoods have significantly higher proportions of Asian residents—nearly 30 percent or twice the countywide average. The San Gabriel Valley, in particular, has been the center of Chinese American community in Los Angeles since the 1970s, an *ethnoburbinization* phenomenon in which higher educational attainment factored prominently (Zhou, Tseng & Kim, 2008). Those born outside the US are also represented at higher rates in engineering hot spots than in hot spots for either arts or social science. As with other fields of study, the population in the average hot spot is older compared to the average cold spot. Economic characteristics of engineering clusters are generally unremarkable relative to trends already reported on—hot spots have higher incomes, lower unemployment, more in-migration, and less poverty. Of note is the slightly lower gap between Gini Index in hot spots and cold spots relative to other field of study clusters. The latter is partially attributed to the relatively lower rates of bachelor's degree attainment in hot spots, which although less than a majority, is still 25 percent higher than the countywide average. Though not immediately apparent from the data why bachelor's degree attainment is relatively lower in engineering hot spots, parity across fields of study—engineering, arts, business, sciences, and social sciences degree holders all comprise between 5 and 9 percent of residents in the average engineering hot spot—is perhaps connected.

Single family homes are characteristic of the suburban neighborhoods that are engineering hot spots, which translates into renters comprising less than half of residents on average. To that end, notable is the median year in which structures in those hot spots are built—1967—a reflection of the midcentury suburban boom in Los Angeles. The 6 percent of residents in the average hot spot who commute over 1 hour to work reflects the suburban geography of engineering clusters, while also pointing to factors beyond proximity to the workplace that attract residents. Research has documented the significance of proximal social networks, for instance, in offering positive tradeoffs with the seemingly unpleasant aspects of long commutes (Guidon et al., 2019). Figure 5.8 illustrates the relationship between long commutes and engineering clusters. The density of bars and coffee shops is not especially noteworthy in engineering clusters, though golf courses and country clubs are overrepresented in the average hot spot. All told, the case of engineering and the San Gabriel Valley surely complicates understandings of *living near work*, as well as characteristics of neighborhoods beyond purely commercial amenities that attract professionals with particular backgrounds, desires, interpersonal networks, and lived experiences.

Humanities Degrees

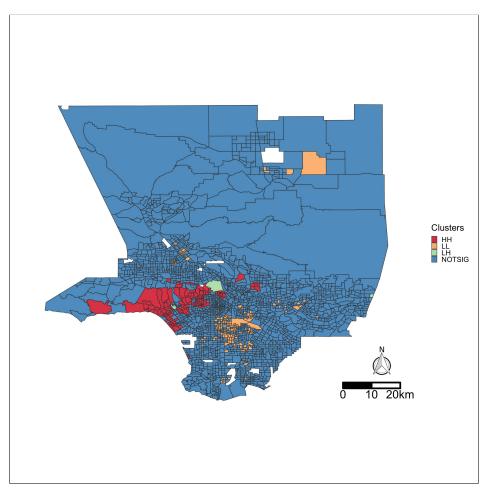


Figure 5.9: Humanities Degree Clusters, 2015

The geography of humanities degree clustering is similar to that of their close academic kin in both the arts and social science, with 138 hot spots stretching from Malibu in the far western edge of LA county eastward toward Hollywood and Silver Lake and over 174 cold spots centered in South and East LA. All told, however, the vast majority of Los Angeles neighborhoods are not significant clusters of humanities degree holders, which is bolstered by data below showing that far more residents in humanities degree hot spots have arts and social sciences degrees compared to humanities degrees.

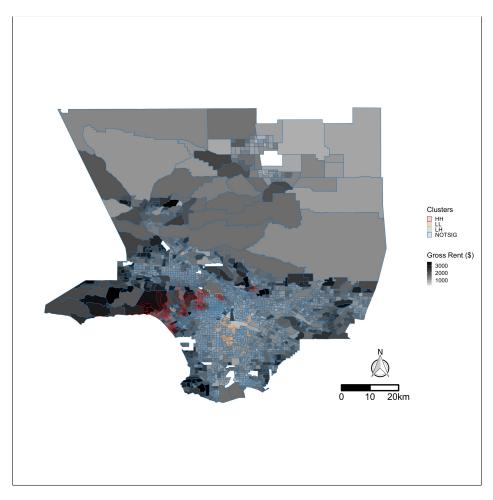


Figure 5.10: Spatial Distribution of Gross Rent (2015) with Hum. Clusters Overlaid

Overlap of spatial patterns of humanities degree holders and those in adjacent fields like arts and social sciences is similarly revealed in the demographics of humanities clusters, with averages mirroring those of the latter two disciplinary classifiers. Over three quarters of residents in the mean hot spot are White and the median age skews slightly older (a relative term) at 40 years old. Bolstered by swanky neighborhoods north of Montana Avenue in Santa Monica and in the Hollywood Hills, poverty in the average hot spot is less than 1 percent. Unsurprising are sky high rates of in-migration to the mean humanities hot spot neighborhood given desirable Westside locations, nearly 4.5 percent of residents moved from out-of-state in the previous 12 months. It also goes without saying that college students make up a smaller proportion of residents in high humanities degree neighborhoods, where over 57 percent of residents already have bachelor's degrees. Only around 8 percent of residents in those neighborhoods hold degrees in the humanities, as mentioned, suggesting an obvious fuzziness in the geospatial properties of fields of study, particularly at the relatively fine-grained distinction between arts, social science, and the humanities.

Nevertheless, data points like an average of over 2 coffee shops and one-and-a-half museums in humanities hot spots again indicate the unique demand-side motivations of urban denizens with formal higher education credentials. Likewise, the specific context of Los Angeles shines through in gulfs between hot and cold spots of humanities degree holders in areas like commuting on public transit-over twice as many residents in cold spots commute on trains and busses than in hot spots-and rent-nearly \$2,000 in hot spots despite the classist trope of the English major barista-suggesting that English majors are in fact more likely to be patronizing the trendiest Santa Monica coffee shop staffed by residents from neighborhoods across the county where less than 5 percent of residents have four-year college degrees. As Ong and Miller (2014) have documented, the *spatial mismatch* hypothesis used by urban scholars to describe distancedependent contingencies in labor market opportunities belies many realities of the car-centric culture of Southern California. Likewise, the correlation between the clustering of residents with historically lower earning college majors and high rent in tony LA neighborhoods shown in Figure 5.10 further complicates decades old notions of residential and labor market mobility, specifically in this case by highlighting how horizontal arrangements of residents upend otherwise predictable patterns of economic variegation. Indeed, an emerging trend in these findings is just how stable the geographic manifestation of vertical stratification is despite such lateral variation by field of study in a city as sprawling and polycentric as Los Angeles.

Education Degrees

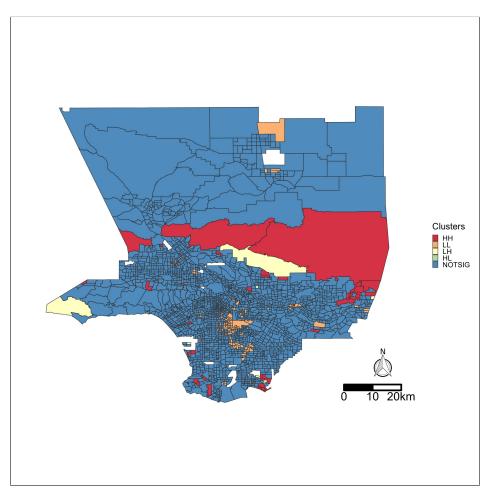


Figure 5.11: Education Degree Clusters, 2015

Though comprising the smallest proportion of any of the eight fields of study examined, education degree clustering is particularly noticeable in some of the county's largest (by area) individual census tracts. Just 41 education degree hot spots were found in Los Angeles, sprinkled around the edges of both urban and suburban concentrations—around the Angeles National Forest, for example—that can hardly be compared to densely populated neighborhoods in Koreatown and West LA. Nonetheless, cold spots, numbering 129 tracts, fall in line with clustering of other fields of study around South LA and one-off neighborhoods in the suburbs. It is perhaps unsurprising that the specificity and professional orientation of education degrees would result in an equally unique spatial patterning in a county home to millions of K-12 and college students.

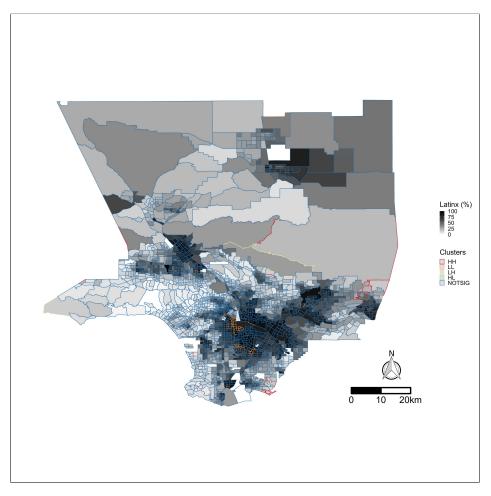


Figure 5.12: Spatial Distribution of Latino Residents with Educ. Clusters Overlaid

A slightly higher Latino population is represented in education hot spots than in other neighborhoods, but overall, the tracts are whiter and older than both cold spots and the county-wide average. Another significant demographic point is shown in the proportion of immigrant residents in education hot spots, over 15 percent below county averages and the smallest yet of any degree hot spot or cold spot. While the same could be said of other labor market sectors to be sure, the implications of a chunk of the county's educators living in neighborhoods that do not look like the rest of the city—and ostensibly, its public school students—is particularly notewor-

thy. Figure 5.12 shows the distribution of Latino residents in LA County with education degree clusters overlaid, still reflecting *White flight* from the urban core accelerated by desegregation of the Los Angeles Unified School District in the late 1960s (Schneider, 2008). Median income is relatively high at over \$50,000 in hot spots, surely bolstered by stable, if not ample, salaries of K-12 teachers, counselors, and administrators. The most professional orientated degree analyzed yet, in-migration in hot spots is in line with countywide averages, suggesting perhaps a more typical demand-side appeal than neighborhoods in the urban core.

The number of K-12 students is also closer to countywide average in hot spots, as is the bachelor's degree attainment rate at 41 percent. That relatively lower rate of educational attainment in hot spots is reflected in the varied composition of fields of study, with the proportion of education degree holders standing at nearly two standard deviations above the countywide mean. Cold spots are particularly cold, alternatively, at less than half of a percent of residents in the average tract holding education degrees. That split appears in housing data from education clusters, for example, a 40 percent hot-cold gap in the proportion of renters. The visible geographic arrangement discussed above is also apparent in the commuting behaviors of residents in the average hot spot, with over 6 percent driving 1 hour or more to work. More pedestrian to that end are the commercial dynamics of neighborhoods with relatively large proportions of education degree holders. Again, though, the relative fluctuations of socioeconomic and cultural dynamics among neighborhoods with above average or even just close to average levels of higher education attainment co-exist with a rigid socio-spatial scaffolding of which those in the lowest strata of attainment are enmeshed in a significantly more fixed social topography.

Business Degrees

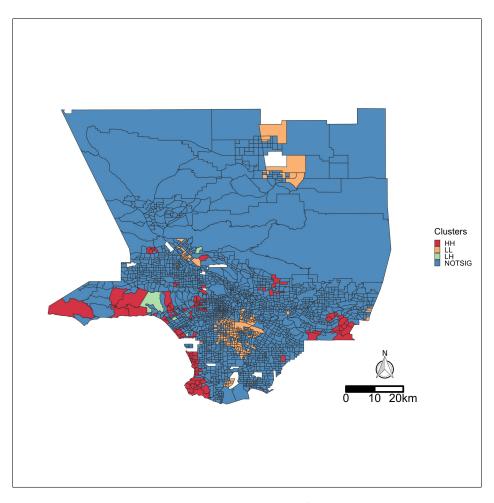


Figure 5.13: Business Degree Clusters, 2015

Snaking along Wilshire Boulevard from Santa Monica to downtown LA are a string of 126 hot spots of business degree holders, mirroring the pattern of the city's economic development in the twentieth century. There are additional hot spot agglomerations in coastal neighborhoods near Marina Del Rey and around the Palos Verdes Peninsula and in the far southeast of the county in and around the suburban community of Diamond Bar. Over 212 cold spots are also dotted throughout now familiar locations in south LA and around Palmdale, as well as a handful of tracts in the northern San Fernando Valley. A professional-oriented field not wholly unlike education, the characteristics of neighborhoods with large numbers of business degree holders nonetheless differ from those of the perhaps more provincial education hot spots.

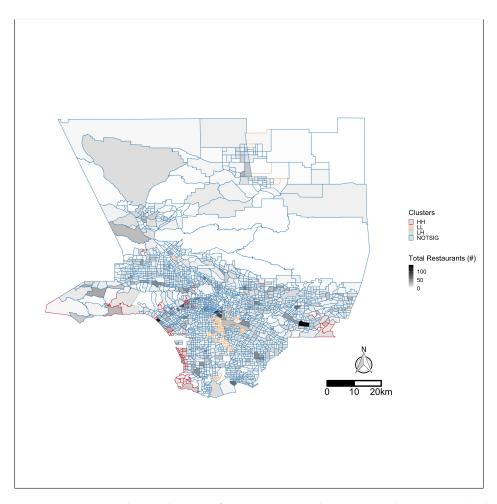


Figure 5.14: Spatial Distribution of Restaurants with Business Clusters Overlaid

Following trends observed above, business degree hot spots are generally older and whiter, though clusters in the southeast corner of the county also highlight the neighborhoods' significant Asian populations. Still, gaps along racial/ethnic lines between hot and cold clusters of business degree holders are stark—83 percent of residents in cold spots are identified as Latino compared to just 12 percent in hot spots, all in a county where 47 percent of residents are identified as Latino alone. That vertical divergence is again reflected in economic characteristics, as well—the average hot spot boasts median incomes and in-migration rates well above countywide averages and, conversely, cold spots have higher rates of poverty and unemployment. Some trends carry over to educational dynamics of business clusters, for example, the relatively smaller composition of students in hot spots compared to cold spots and non-significant tracts. Bachelor's degree attainment is also much higher in hot spots than the county average, with a majority of residents holding a bachelor's degree or higher. Fields of study, though, somewhat heterogeneous, with arts/communications degree holders actually outnumbering business degree holders in hot spots. The latter is no doubt reflective of the city's leading industry and a reminder that entertainment is as much big business as it is a creative endeavor in Hollywood.

Touching some of the wealthiest enclaves in the region, it is no surprise that average rent in business degree hot spots is higher than any other cluster analyzed at over \$2,100 per month, a prescient figure now the norm for citywide rents in 2020. Fewer than 50 percent of residents in the average hot spot are renters, though, as reflected in the more than 5 percent who commute over 1 hour to work. Still, the presence of dense Westside neighborhoods and proximate corporate corridors in hot spot figures show the commercial appeal of neighborhoods with above average rates of bars, coffee shops, boutiques, and restaurants. The density of the latter are shown overlaid with business clusters in Figure 5.14, echoing research on the impact of commercial amenities and consumption activities on the residential behaviors of so-called *knowledge workers* (Frenkel et al., 2013).

Perhaps more than any other point found in analyses above, that statistically significant variation in field of study agglomerations are capable of revealing unique consumption patterns (as well as socioeconomic and housing characteristics) stands out as evidence of horizontal contrasts affecting residential behavior, and indeed, the form of a city as diverse as Los Angeles. The question of whether those horizontal boundaries can be used to model higher order urban dynamics and if so, what they can tell us, remains to be seen.

Field of Study Clusters Detail

The county-wide views elucidated above naturally bring about curiosities as to what these dynamics look like closer to the palm tree-lined boulevards that often mark the very boundaries from which residential behaviors are made visible to the naked eye. Below in Figure 5.15 is a *zoomed-in* detail of Figure 5.1, which showed arts/communication degree clusters.

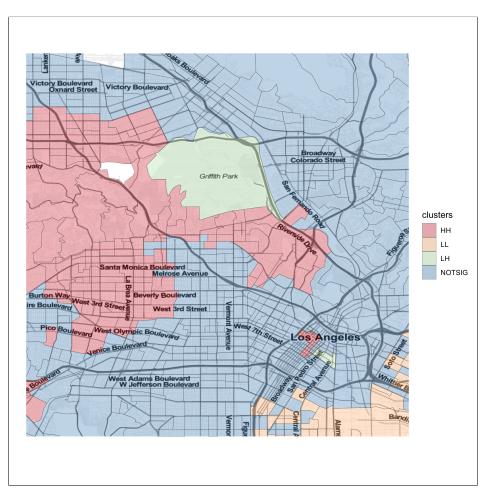


Figure 5.15: Arts and Communications Degrees Clusters, 2015, Detailed View

This detail centers on downtown Los Angeles, the encircled portion labeled as such in the lower right corner of the figure. There, we see how different clusters are arranged at a more granular level, with clear definitions of hot spot, cold spot, and outlier neighborhoods. In the northwest corner of downtown, an arts/communication hot spot exists in and around LA's most notable formal art institutions—namely, the Walt Disney Concert Hall, The Broad museum, and the Museum of Contemporary Art along Grand Avenue. Bordering that hot spot are outliers—the green *cold-in-hot* areas of largely unpopulated Griffith Park and the all-too-populated slice of land downtown known as Skid Row. The latter points to one of the few features in Census data where people experiencing homelessness are visible, a regrettable oversight, not just empirically, but in thinking how best to serve victims of the city's housing crisis.

Figure 5.15 perhaps best illustrates the stratification of the city's 2,000-plus neighborhoods, at once connected by general geographic boundaries—i.e., downtown LA—and separated by residential behaviors attuned to socioeconomic, housing, and commercial characteristics that reflect the diverse habiti of millions of human beings. A bit further west, we see dense agglomerations of arts/communication hot spots along Melrose and Beverly Boulevards in Hollywood and south of Griffith Park in Los Feliz and Silver Lake. The blue, *non-significant* neighborhoods in between—e..g, East Hollywood and Historic Filipinotown—almost appear to be resisting the encroachment of the red wave of creatives, enclaves surely ripe for gentrification. But still opaque in this detail are some of the aesthetic forces undergirding residential patterns, that is, sensory pleasures and subjectivities cultivated and reproduced amid the overarching social scaffolding and manifested in the city's physicality.

The Built Environment of Field of Study Clusters

Central to the socio-spatial realities of urban areas are their networks of dwellings, parks, hubs of commerce, culture, and politics, and the roads and byways in between. Aside from a preexisting knowledge of LA neighborhoods or assumptions based on the physical size of census tracts in the maps above—e.g., less people in the big ones, more in the densely packed interior tracts—gleaning the material architecture of an *arts degree hot spot* or a *business degree cold spots*, let alone the thousands of non-significant tracts, is not immediately apparent from the figures presented above. As it is, the US Census data itself is not terribly rich in communicating the built environment of a city, though survey items like commuting methods, housing stock, and rent certainly allow for some interpretation. The median age of a tract's built structures perhaps speak most directly to the qualitative features of a given neighborhood's construction and warrants additional discussion here.

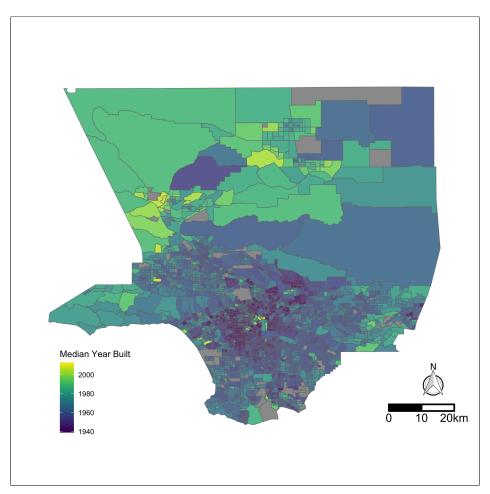


Figure 5.16: Median Age

As mentioned in the countywide descriptive findings above, median age of structures ranges from 1939 in inner-city residential neighborhoods like Glassell Park in northeast LA and neighborhoods along Western Avenue in South LA, to a countywide mean of 1962, typified in the suburban ranch homes of Rosemead and El Monte in the San Gabriel Valley, to mid-2000's speculative developments in Playa Vista just north of LAX and gated communities in the Santa Clarita Valley in the northwest part of the county. Pertinent here is the age of structures in field of study clusters, which generally follow a trend of relatively newer stock in hot spots and each cold spot mean falling below that of the county average of 1962. Arts/communications degree hot spots have the oldest structures with a median at around 1960 and business hot spots, the newest, a relative term, at 1967. Though it cannot be said for certain that it is the craftsman bungalows of northeast LA that attract Angelenos with degrees in creative fields at higher rates or the mid-century suburban comforts of gates, big yards, and swimming pools that draw business majors, the built environment of a neighborhood surely plays a role in residential preferences (Li et al., 2020). That such variations and reasonable assumptions about residential preferences can be deduced from fields of study is the noteworthy finding here and certainly brings about questions as to the types of individuals who might find themselves in older, aesthetically-alluring neighborhoods.

Field of Study Relationships with Gentrification

Bracketing debates as to the causal effects of gentrification, at hand in this analysis are the relationships with proportional field of study variables and whether a census tract was determined to be gentrified or gentrifying in 2015. Links to the prior set of analyses are unmistakable, with descriptive characteristics of some field of study clusters indicative of familiar signs of gentrification—e.g., arts degree hot spots that are located in the urban core of LA, are whiter on average, and contain densities of bars and coffee shops well above the countywide average—and others—like the peripheral hot spots of education degrees or persistent cold spots in south

LA—that shed light on the educational dynamics of urban processes that exist external to and/or conjointly with flows of creative, social, and economic capital swirling throughout Southern California.

Below are results that aim to more precisely capture the relationship between gentrification and field of study in LA County neighborhoods. First, I report results from a neighborhood-level analysis that takes into account the proportional composition of degree holders in seven fields along with relevant demographic, economic, housing, and commercial control variables. I then attempt to address a significant limitation in ACS data, which reflects field of study variations among Angelenos who have already completed a degree at some indeterminate point prior to data collection. By drawing on analysis of over 6,800 student records from FCC, findings suggest that field of study is not simply a reflection of a natural distribution of educational credentials or professional orientation, but also a contemporaneous stratification mechanism that is connected to urban processes like gentrification.

Neighborhood Level

Proportional field of study variables across more than 2,000 Census-defined LA County neighborhoods and their relationship with the outcome of whether a tract was gentrified/gentrifying (=1, 0 else) are primary variables of interest in logit models constructed, results from which are reported as log-odds in Table 5.2. Model 1 in Table 5.2 is a baseline incorporating only field of study variables with no controls or adjustment for spatial dependence, from which a statisticallysignificant positive relationship between arts/communications degrees is detected. Model 2 incorporates select demographic, economic, housing, and commercial characteristics of census tracts included based on qualitative interpretation of variations in local clustering analyses outlined above. Here, we see field of study variables lack statistical significance and the proportion of white residents, age, in-migration, and K-12 students bear negative associations with the gentrifying outcome variable, while total housing units and gross rent are statistically-significant (albeit at a conservative p < 0.10) positive predictors. Model 3 importantly controls for spatial dependence in census tract variables by inclusion of 10 Moran eigenvectors that filter out spatial autocorrelation to a sufficiently minimal level. Doing so again shows the statistically-significant positive association between the proportion of residents with arts/communications degrees and the likelihood that a tract was gentrified or gentrifying in 2015. Total observations are 2,326 census tracts for the baseline model and 2,291 in the latter two given missingness in a handful of controls. The inclusion of controls and spatial filtering considerably improve model fit, as measured by AIC. Other model diagnostics addressing linearity, collinearity, and spatial filtering were performed, the results of which can be found in Appendix B.

	De	ependent variab	le:
	Gentrifying (= $1, 0$ otherwise)		
	(1)	(2)	(3)
Total Population	-0.0002^{**}	-0.0004^{**}	-0.0003^{*}
	(0.0001)	(0.0001)	(0.0001)
% Social Sciences Degrees	-0.078	-0.060	-0.091
N obera berenees Degrees	(0.065)	(0.075)	(0.087)
% Sciences Degrees	-0.059	-0.066	-0.126
U	(0.065)	(0.079)	(0.090)
% Engineering/Comp Sci Degrees	0.016	-0.002	-0.016
	(0.070)	(0.086)	(0.098)
% Arts Communications Degree	0.147^{***}	0.076	0.092^{\dagger}
	(0.034)	(0.050)	(0.055)
% Humanities Degree	-0.059	0.048	0.047
0	(0.079)	(0.088)	(0.099)
% Business Degree	-0.035	-0.083	-0.097
0	(0.062)	(0.071)	(0.080)
% Education Degree	-0.155	0.179	0.256
0	(0.140)	(0.152)	(0.159)

% Born Outside US		0.038^{**} (0.014)	0.058^{***} (0.016)
% White		-0.029^{***} (0.008)	-0.018^{*} (0.009)
Median Age		-0.161^{***} (0.042)	-0.153^{***} (0.046)
% Poverty		-0.033 (0.043)	-0.055(0.049)
% Unemployment		-0.060 (0.074)	-0.067 (0.081)
Gini Index		4.212^{\dagger} (2.361)	3.902 (2.719)
% In-Migration		-0.198^{*} (0.078)	-0.190^{*} (0.084)
% K-12 Students		-0.099^{*} (0.044)	-0.087^{\dagger} (0.049)
% College Students		-0.014 (0.025)	-0.013 (0.027)
Total Housing Units		0.010 [†] (0.006)	0.007 (0.006)
Gross Rent (\$)		0.001 (0.001)	0.001^{\dagger} (0.001)
% Commuting on Public Transit		0.024 (0.032)	0.007 (0.036)
% Commuting \geq 1 Hour		-0.043 (0.052)	-0.071(0.058)
% Renters		0.009 (0.009)	0.013 (0.010)
Total Bars		0.199** (0.071)	0.218 ^{**} (0.079)
Total Restaurants		-0.008 (0.016)	-0.011 (0.019)
Total Coffee Shops		0.038 (0.105)	0.020 (0.119)
Constant	-1.966^{***} (0.364)	1.888 (2.417)	-0.431 (2.705)

Observations	2,326	2,291	2,291
Spatial Filtering	No	No	Yes
Log Likelihood	-353.806	-299.440	-253.097
Akaike Inf. Crit.	725.612	650.881	578.195
Note:	† p<0.1; * p<	:0.05; ** p<0.01	; *** p<0.001

Table 5.2: Estimates (log-odds) - Neighborhood Level Gentrification

Interpretation of results may be as simple as noting that the proportion of arts/communications degree holders in a neighborhood positively predicts gentrification, though of course the often opaque nature of statistics and complex reality of life in Los Angeles demands nuance, or at least, a visual depiction. Odds ratios can be moderately instructive and exponentiating coefficient estimates in Table 5.2 tells us, for example, that a 1 percent increase in the proportion of arts degree holders is predicted to increase the odds that a tract is gentrifying by 10 percent or roughly a 50 percent increase per one standard deviation increase. This finding is considerable, suggesting a relatively strong connection—from an absolute standpoint, with a much more conservative measure of statistical significance—between proportional representation of arts degree holders in a neighborhood and the collective socioeconomic and spatial dynamics by which it is shaped.

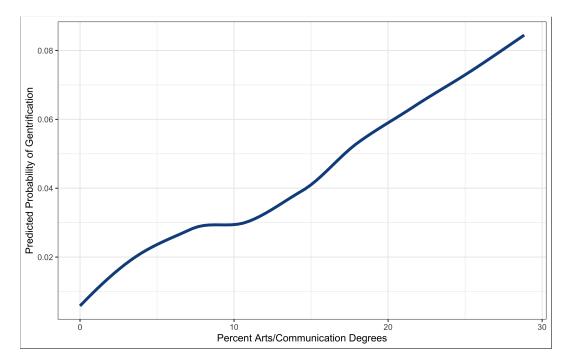


Figure 5.17: Predicted Probability of Gentrification, Varying Levels of Arts/Communications Degrees

Rather than relying on analysis of model intercepts or perhaps going into the field and using aesthetic cues to generate baseline odds of gentrification for a given neighborhood, I instead use existing data and Model 3 to obtain predicted probabilities and investigate instructive counterfactual scenarios. As Figure 5.17 shows, while arts degrees might appear to have a relatively strong positive association with gentrification, the relative credentialed creatives in an LA census tract may not be a particularly compelling data point to actually predict the probability of whether the neighborhood is gentrifying. That is to say, though the narrative that *the higher proportion of arts degree holders in a neighborhood, the higher probability that that neighborhood is gentrifying* holds true, that probability is relatively low holding constant all other variables included in the model at their countywide means.

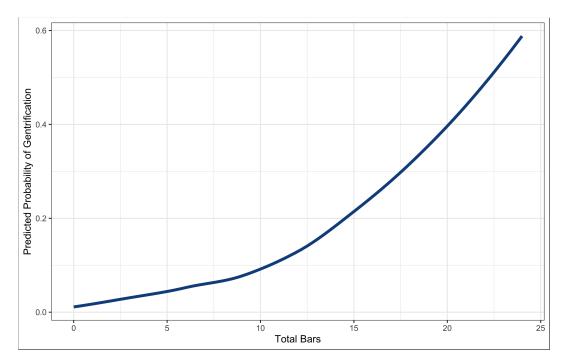


Figure 5.18: Predicted Probability of Gentrification, Varying Levels of Total Bars

To illustrate further, varying the number of bars while keeping constant all other variables including arts degrees—shows a much more precipitous climb in the probability that a neighborhood is gentrifying per added bar compared to the previous scenario. Precisely parsing causal effects of gentrification is not the aim of this analysis, nor is it mathematically appropriate to do so here, but from correlational nuances brought to light with Model 3 are possible links to a chronology of neighborhood change. Ultimately, though, the effort begins to resemble standing on a street corner downtown and asking whether the artists or the bar came first.

Community College Student Level

Just who exactly would you need to ask to have such a question answered anyway? Surely, working creatives living in one of LA County's 2,000 census tracts might have insight into the residential behaviors of their neighbors. Perhaps more accurately, on the other hand, would be perspectives from longtime neighborhood residents who might be able to establish a more reflex-

ive timeline of gentrification than its causal agents. A detailed ethnography is certainly worthy of pursuit, but beyond the scope of this study, and thus, I turn to other methods to attempt to patch together field of study associations with gentrification ex post facto and contemporaneous.

The latter is achieved through analysis of the course-taking patterns of students attending a community college—termed FCC in the diverse region around northeast LA that is one of the most recent examples of gentrification in the city (Lin, 2019). Student records obtained from the institution are for 6,989 first-year, first-time students enrolled in courses at the college during the 2015-2016 academic year, which aligns with the ACS collection timeline. In theory, these students were living alongside those with completed bachelor's degrees tabulated by the Census Bureau and analyzed in prior sections. Courses were aggregated into categories aligning with ACS field of study categories, a complete list of which can be found in Appendix D. Notably, the statistically significant association between the proportion of arts/communications degrees and gentrification at the neighborhood level can be further disaggregated given the more fine grained course-taking data. As such, I break down courses into visual/studio arts, communications, and other arts courses (e.g., theatre, dance, music). Reflected in student course-taking patterns is a core aspect of the community college, with easily transferrable humanities and social science courses taken at the highest rates.

Variable	n	Min	x	Max	s
Visual/Studio Art Courses	6989	0	0.16	8	0.55
Communications Courses	6989	0	0.15	7	0.47
Other Art Courses	6989	0	0.25	14	0.90
Science Courses	6989	0	0.31	4	0.60
Computer Science/Engineering Courses	6989	0	0.55	5	0.75
Education Courses	6989	0	0.16	7	0.47
Humanities Courses	6989	0	1.43	8	1.31
Business Courses	6989	0	0.20	6	0.57
Social Science Courses	6989	0	0.69	6	0.94

Table 5.3: FCC Student Course-Taking Patterns, 2015-2016 Academic Year

Like their neighbors, it is useful to consider characteristics of FCC students beyond field of study alone. With respect to the outcome of interest, just over 6 percent of the sample live in gentrifying census tracts. Referring back to Figure 4.1, those students are surely concentrated in northeast LA enclaves like Highland Park, the gentrification of which is thoroughly documented by Lin (2019). While the racial composition of such neighborhoods is reflected in the over 50 percent of the sample identified as *Hispanic* by the college's institutional research office, the institution's proximity to the San Gabriel Valley is also apparent in its relatively large population of Asian students. White students make up the next largest racial/ethnic group, at just over 15 percent of the FCC student sample.

California Community College system students receive upwards of \$2 billion in need-based financial aid annually, reflected in 71 percent of the FCC sample receiving some form of economicallycontingent tuition offset. More balanced is the sample's composition of part-time and full-time students, highlighting the community college's unique position in the educational ecosystem of the city. Dispelling any notion that community colleges are full of retirees taking one-off art classes, however, over 90 percent of the sample were seeking degrees in the time period examined with a mean age of around 22. Indeed, over 1,200 students in the sample had declared a major during the 2015-16 academic year. These characteristics reflect variables—at least those available in campus administrative records—that likely impact where students live in the city and their educational paths, and thus are used as controls in regressions below.

Variable	Levels	n	%
Live in Gentrifying Neighborhoods	No	6561	93.9
	Yes	427	6.1
Race (IPEDS Categories)	Asian	1654	23.7
	Black	249	3.6
	Hispanic	3759	53.8
	Native American	7	0.1
	Pacific Islander	4	0.1

	Two-or-more	209	3.0
	White	1071	15.3
	NA	36	0.5
Received Need-based Aid	No	2032	29.1
	Yes	4957	70.9
Time Status	Full-Time	3355	48.0
	Part-Time	3634	52.0
Degree-Seeking	No	597	8.5
	Yes	6392	91.5
Arts/Communications Major		220	3.1
Humanities Major		114	1.6
Engineering Major		29	0.4
Social Science Major		484	6.9
Business Major		182	2.6
Science Major		99	1.4
Education Major		74	1.1
Age at Start of 2015-16		21.74 (mean)	7.14 (s.d.)

Table 5.4: Student Characteristics

With the relative proportion of arts/communications degree holders revealed as a positive predictor of gentrifying neighborhoods in LA County in Models 1 and Model 3, the question of whether that relationship holds among enrolled college students was a key focus of estimates shown in Table 5.5. Notably, the student-level models can more precisely identify the arts subject matter relationships with student residential patterns through disaggregation of arts/communications courses. Indeed, aggregated arts/communications courses are not a significant predictor of living in a gentrifying neighborhood, but once disaggregated, visual/studio arts courses are a significant positive predictor, while communications and other arts courses are not. At the same rate, the number of sciences courses are a negative predictor of whether a student lives in a gentrifying neighborhood. Socio-economic control variables are also illuminating, with Black and Latino students and students receiving need-based aid being more likely to live in a gentrified neighborhood, holding other variables constant. Below, I add more context by translating log-odds estimates into predicted probabilities and examining counterfactual scenarios.

		Dependent	variable:	
	Lives in a Gentrifying Tract (= $1,0$ otherwise)			erwise)
	(4)	(5)	(6)	(7)
Arts/Communications Courses	-0.038 (0.046)			
Studio Arts		0.132^{\dagger} (0.077)	0.166^{*} (0.079)	0.191* (0.085)
Communications		-0.181	-0.175	-0.151
		(0.125)	(0.127)	(0.129)
Other Arts		-0.089 (0.070)	-0.097 (0.072)	-0.094 (0.072)
c ·	0.054**			
Sciences	-0.254^{**} (0.097)	-0.250^{**} (0.097)	-0.184^{\dagger} (0.099)	-0.185^{\dagger} (0.100)
Computer Science/Engineering	-0.101 (0.075)	-0.100 (0.075)	-0.073 (0.082)	-0.086 (0.083)
Education	0.186* (0.089)	0.194* (0.089)	0.131 (0.092)	0.144 (0.096)
Humanities	0.091* (0.040)	0.093* (0.040)	0.045 (0.045)	0.052 (0.046)
Business	-0.221^{*} (0.107)	-0.215^{*} (0.107)	-0.152 (0.107)	-0.180 (0.112)
Social Sciences	-0.0004 (0.054)	0.003 (0.054)	0.010 (0.057)	-0.003 (0.060)
Race/Ethnicity - African American or Black	``	· · ·	1.174^{***} (0.265)	1.168^{***} (0.265)
Race/Ethnicity - Hispanic			0.940*** (0.162)	0.931*** (0.163)
Race/Ethnicity - Native American			1.501 (1.096)	(0.103) 1.489 (1.095)
Race Ethnicity - Pacific Islander			-10.005 (266.600)	-10.028 (266.693)
Race Ethnicity -			0.268 (0.392)	0.260 (0.392)
Race Ethnicity - White			0.408^{\dagger} (0.216)	0.414^{\dagger} (0.216)
Race Ethnicity - Unknown			0.033	-0.004

			(1.028)	(1.029)
Need-Based Aid Received			0.492*** (0.136)	0.490*** (0.136)
Part-Time			-0.038 (0.128)	-0.037 (0.128)
Age			0.004 (0.008)	0.004 (0.008)
Degree-Seeking			-0.196 (0.178)	-0.203 (0.178)
Male			0.013 (0.103)	0.008 (0.104)
Arts/Communications Major				-0.281 (0.327)
Humanities Major				-1.240 (0.929)
Engineering Major				0.623 (0.626)
Social Sciences Major				0.192 (0.186)
Business Major				0.304 (0.321)
Sciences Major				-0.160 (0.932)
Education Major				-0.303 (0.486)
Constant	-2.719*** (0.092)	-2.729*** (0.093)	-3.670^{***} (0.342)	-3.662^{***} (0.343)
Observations Log Likelihood Akaike Inf. Crit.	6,988 —1,595.455 3,206.909	6,988 1,592.228 3,204.456	6,988 -1,552.847 3,149.693	6,988 -1,547.935 3,153.870
Note		+ n .0 1. * n	-0.0E. ** m -0.0	1. *** n -0.001

Note:

† p<0.1; * p<0.05; ** p<0.01; *** p<0.001

 Table 5.5: Estimates (log-odds) - Student Level Gentrification

Holding continuous variables at their means and dichotomous variables at the majority level, Figure 5.19 shows the gradual increase in the predicted probability of an FCC student living

in a gentrifying neighborhood as the number of art courses they are enrolled in increases. Putting numbers to the graph, the baseline predicted probability of a Latino student, enrolled part-time, who receives need-based aid, and is enrolled in 0 studio/visual art courses living in a gentrifying neighborhood is around 7.8 percent. If the same student was enrolled in 3 studio/visual art courses, the predicted probability that that student lives in a gentrifying neighborhood shoots up to over 13 percent. For the purely hypothetical student enrolled in 8 art courses, they would have over a 1 in 4 chance of living in one of LA County's 80-plus gentrifying neighborhoods.

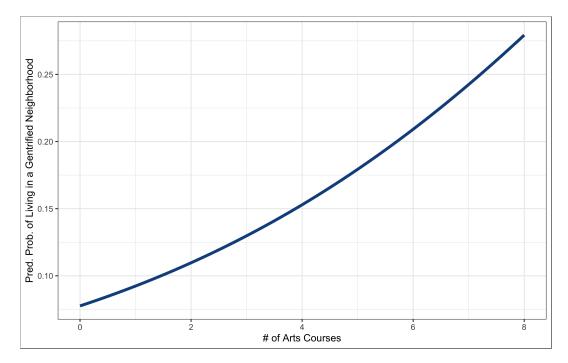


Figure 5.19: Predicted Probability of Living in Gentrifying Neighborhood, Varying Levels of Art Courses

As noted, race/ethnicity was also a significant predictor of whether an FCC student lives in a gentrifying neighborhood. Using estimates from Model 7, predicted probabilities of living in a gentrifying neighborhood for different students—holding other variables at means/modes—are shown in Table 5.6. As reflected in Table 5.5, the predicted probability of a Black FCC student living in a gentrifying neighborhood is twice and three times as high as that of White and Asian students, respectively. While implications for the dynamics of urban change in Los Angeles are apparent from such findings, also revealed are questions for education institutions. Namely, how might you support a student body compose of both gentrifiers and the gentrified? The next chapter will delve more deeply into the tangential sociology of that question and others stemming from results here and in the previous sections, while also recalling relevant theory and literature outlined in Chapters 1 and 2.

Race/Ethnicity	Predicted Probability
Black	10.2
Latino	8.2
White	5.1
Asian	3.4

Table 5.6: Predicted Prob. by Race/Ethnicity

Summary of Results

As can be the case with even the most rigorous of social scientific endeavors, results from the above analyses at once confirm priors, shed light on new patterns, and confound precise classification of a unifying social theory of the connection between higher education and residential behaviors of urbanites. Nevertheless, descriptive findings illuminated educational patterns otherwise unclear to the naked eye whether strolling on the theme-park-like (Deener, 2012) boardwalks of the Westside's beach communities, driving on lone stretches of pavement in the Antelope Valley, or observing the cranes and construction of real-time gentrification from an Expo Line train car through south LA. The city's famed entertainment corridors from Santa Monica to Hollywood are home not just to celebrities from film, music, sports, and social media, but also to an outsized proportion of degree holders in arts and communications. While studies like those from Scott (2019) point to proximity of related employment as a key antecedent for such residential preferences, noticeable from this analysis are the commercial characteristics of neighborhoods that contain large numbers of residents with formal credentials in various fields. The significantly higher density of bars and restaurants in arts degree hot spots clustered in the inner ring of Los Angeles, for instance, suggests the salience of consumption patterns that can be traced to the unequal distribution of cultural capital that preexist neighborhood selection. Likewise, the geographic clustering of science, business, and engineering degree holders in the suburbs and in the hills echos Bourdieu's intricate web of practices, where spatial distance aligns with distance from social and cultural practices (i.e., engineers may cluster near employers in the suburbs, but do so also because of a social distance from inner city commerce, culture, arts, media, etc.). Referring back to Bourdieu's grid of capital, however, also revealed in the data are a subjugated class of LA residents-clustered in South LA, the Antelope Valley, and scattered neighborhoods in betweenwhose spatial mobility is tethered to an unyielding dearth of both economic and cultural capital. To that end, the latter points are expanded in the next chapter, all buttressed by Bourdieu's own caution against a unidimensional explanation for such phenomena-be it a finite volume of capital or a identity-based or class-reductionist argument-and instead take heed of the "structure of total assets" (1986, p. 115) that exert pressures horizontally and vertically on all individuals in the society.

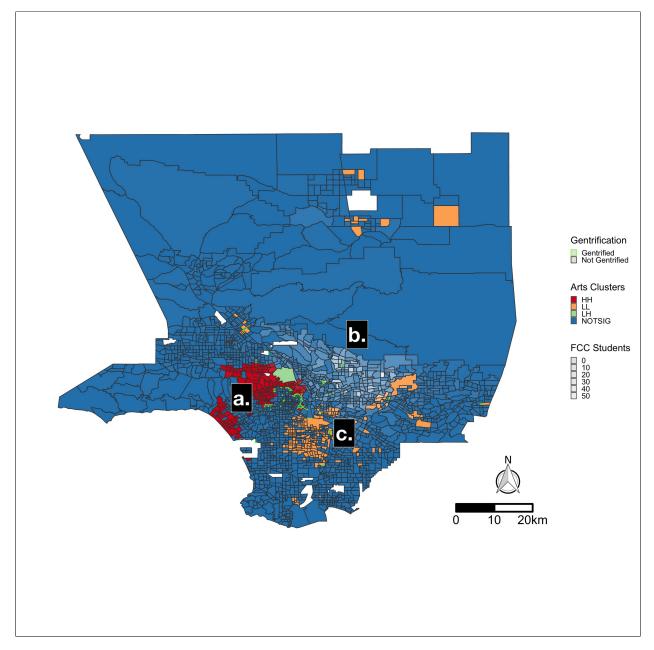
The second set of findings speak more specifically to gentrification, but are no less insightful to the broader dynamics of stratification in Los Angeles. Notable is the positive relationship between the proportion of arts/communication degree holders and gentrification, which mirrors the long studied association between artists and urban renewal (Ley, 2003; Zukin, 1987), but also importantly establishes links with formal arts-related education and the cultural capital it

represents. Rather than simply a function of proximity to the arts and entertainment industry, a similar positive relationship was also documented among a subset of community college students. Those findings do not implicate art students, specifically, as the sole agents of gentrification in Los Angeles, but instead point to the spatial variations in cultural capital as a valuable identification mechanism of residential patterns in the city.

Chapter 6: Discussion and Implications

I began this dissertation on Abbott Kinney Boulevard, one of dozens of famed shopping districts in Los Angeles, but one that appeals to a subset of city residents of relatively specific social, cultural, racial, and class backgrounds who exist primarily as abstract curiosities at best, or straw-men at worst (see a whole genre of writing on *millennials*). Nonetheless, Abbot Kinney is objectively not a suburban shopping mall, closer to, yet still distinct from one of the many sterile modern shopping plazas that proliferate in affluent and gentrifying neighborhoods around the city, just miles from neighborhoods without either; those aesthetic and geographic peculiarities and my interpretation of those differences spurred the questions that I have sought to respond to with this research, and while I never thought my undergraduate degree brought me to Santa Monica, just north of Abbot Kinney and Venice, I do believe that in a humanities or arts or business education are aesthetic cues that influence urban citizens' choice of one home location over another. Compounding and composed of aspects of identity, the proximity to amenities, or economic status, I posited that field of study as a classifier is imbued with an otherwise immeasurable volume of cultural capital and that emerging patterns of residents arranged by field of study would tell us something about the organizational mysteries of LA and American cities writ large.

To a certain extent, the findings above have provided empirical backing to my initial hunch. Mapping LA residents' educational attainment disaggregated by field of study shows a clear geospatial manifestation of horizontal stratification at the level of the county, with *hot spots* of similarly-credentialed renters and home owners reflecting varied socioeconomic and commercial characteristics expressly linked to the vocational and cultural signifiers of different college majors. And as was the case in Venice decades ago, there appear to be links between agglomerations of college educated residents—specifically in the arts—and gentrification. At the risk of rehashing the summarized findings above, I instead present Figure 6.1 as a lodestar for gleaning lessons learned from this study.



a.) Arts degree hot spots bordering gentrifying neighborhoods; **b**.) Density of community college students in and around gentrifying neighborhoods; **c**.) Persistent degree cold spots in South LA.



Depicted are the familiar arts/communication degree clusters from Figure 5.1 along with the density of FCC students—shown earlier in Figure 4.1—and gentrifying tracts from Figure 4.2. Together, revealed just below the surface of polycentric Los Angeles are lateral deviations that at once band together and split different Angelenos and shape housing and labor markets and the educational structure of a state of 40 million residents. The theoretical and methodological lessons that might be taken from these findings extend far beyond the research capacity of any one scholar and as such, I use this final chapter to expand on insights from the three elements featured in Figure 6.1. First, I ask what Bourdieu and other theorists can add to the interpretation of results above and how future research might go about asking and responding to pertinent questions. I then focus on the educational consequences of horizontal stratification and gentrification in cities, paying particular attention to the role of American colleges and universities in those processes. Examination of how, then, decision makers at various political levels could address adverse practices stemming from the present socio-spatial structure of the city takes place in the final subsection.

Field of Study and the Social Topography of Los Angeles

The research design above was devised under the assumption that the contemporary sociospatial conditions during which it was written—circa late 2019 through the spring of 2021—would look more or less the same as its analytical setting of 2015. Compounding social crises that have upended the economic, political, and geographic order of Southern California—indeed, the entire planet—in the first two years of the new decade have, however, morphed this dissertation into much more of an historical study of the region at the midpoint of the prior decade as opposed to a close corollary of the present. That is not to say that Venice is no longer a hot spot for art degree holders, nor has gentrification in Echo Park abated, but the implications of those socio-spatial configurations now and in the near future necessarily exist as assemblages perhaps neglected in empirical and theoretical choices of just more than a year ago. As it is, the churn of urban space persists amid viral epidemics, police violence, and political contestations such that the core question of this study remains—how might field of study explain the past, present, and future of Los Angeles?

While it is true that specific characteristics of urban stratification have been heightened during the COVID-19 pandemic, the process of classification that concerns Bourdieu and other social theorists is still essential to understanding life and organization in the city. Whether binaries e.g., coronavirus positive/negative, vaccinated/unvaccinated—or more horizontal delineations related to work expectations, inequality continues to carve out and reassemble millions of Angelenos and their physical environments; as it stands, such patterns require inquiry should their unintended consequences be identified and addressed. Though on the surface, the emerging urban cultural capital described by Savage et al. (2018)—inherently dynamic and interactive—might seem to be a concept neutered by the prescribed social distance of the present era, an evening stroll along the Venice Beach boardwalk, a brunch-time crawl through downtown's Grand Central Market, or waiting at a coronavirus vaccination site in the Valley elicits many of the same delineative circumstances in 2021 as in 2019. To derive more substance from those arrangements and potential arrangements, a social topographical (Richer, 2015) interpretation of the findings reported above is instructive.

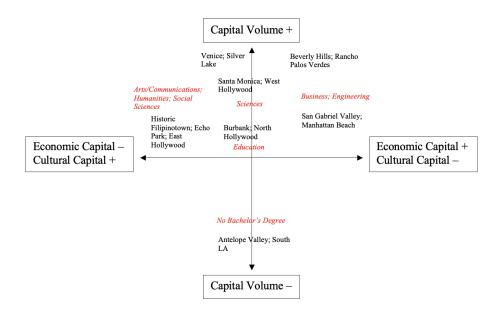


Figure 6.2: Bourdieu's Social Space, LA Patterns

We can first return Bourdieu's capital grid to attempt to apply some of the theoretical logic introduced in Chapter 3 to the results of the analysis described in Chapter 4. Where the y-axis represents total volume of economic and cultural capital and the x-axis shows that total's relative composition, the city of LA becomes a place arranged far differently from the dense patchwork of people, buildings, and freeways that constitute its physical footprint. In the top half of the grid are the neighborhoods and individuals of the dominant economic and cultural class in contemporary Los Angeles, not only composed of bourgeois managers in Century City, but also of young creatives in East Hollywood, wealthy first and second-generation immigrant enclaves in the San Gabriel Valley, and an elite cordoned off in the hills and on the coasts. Below are a dominated class of residents and their agglomerations in areas like Lancaster in the Antelope Valley or Watts in South LA, with universally less access to both a volume of total capital and of dominant forms of cultural or economic capital within. The value of emplacing neighborhoods alongside field of study within Bourdieu's confines is derived not from the substance or specific order of arrangements depicted in Figure 6.2—which as represented, contain plenty of subjectivity—but rather from the distinctions immanent, the invisible lines that separate physical places by their discursive, material, and symbolic (Richer, 2015) boundaries. As it is, recent events provide empirical foregrounding to illustrate that value.

The murder of George Floyd in Minneapolis in the summer of 2020 spurred massive demonstrations against law enforcement institutions across the country, with LA assuming a central node among activists, politicians, and ordinary citizens, and in the media's resulting narrative. Not lost on Angelenos are the scars of prior instances of police brutality and the spatial barriers defined and reinforced by continued abuses of the legal scaffolding attached to them, memories, narratives, and histories necessarily co-dependent with one's physical and social location in the region. But such distance only exists insofar as appropriation is unable to bridge those gaps, practices readily adopted by those with sufficient (social, cultural, and economic) resources and affective wherewithal. In so doing, a spatial phenomenon not terribly distinct from Lefebvre's right to the city concept emerges, famously lamented as the speculative polycentricity of twentieth-century megaregions like LA pushed the very epistemological notions of cityhood and urban citizen to a breaking point (Merrifield, 2012). The existential state of the city described by Lefebvre reflects the specter of globalization and the more specific financialization of the real estate industry in the late 1980s that in its wake left city-dwellers more alienated, separated from the spatial confines that previously had engendered socio-political cohesion through geographic synchronicity (Merrifield, 2012). Recalling Yúdice's (2003) statement on the primacy of culture as a resource in the (post)modern era, where the "claim to difference as a warrant gains legitimacy," we see how dominant classes grapple with Lefebvrian existentialism today.

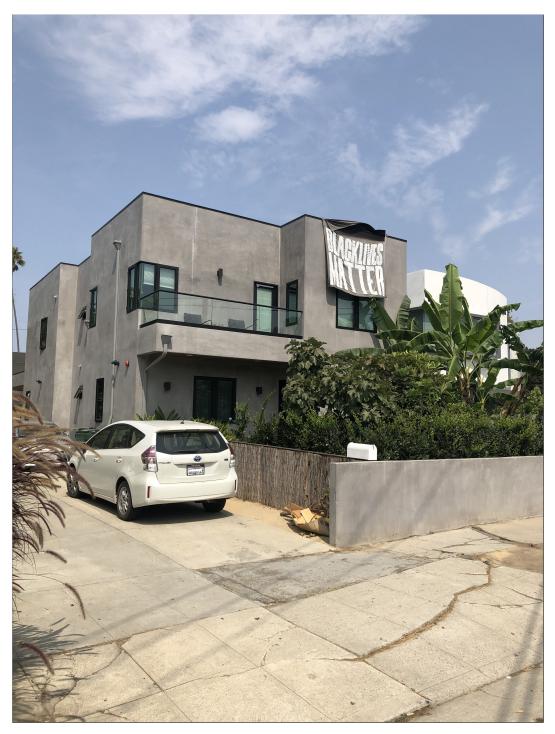


Figure 6.3: Black Lives Matter Banner, Venice, 2021

In long-gentrified Venice, citizens extended claims to centers of the urban social movements of Black communities in Inglewood and South LA in the wake of 2020 uprisings by ensuring their

inclusion within symbolic boundaries that signal to neighbors, and interlocutors like myself, values that might otherwise conflict with their spatial environs. Figure 6.3 is a photograph of a large "Black Lives Matter" banner draped over a newly constructed home in the once Black-majority Oakwood section of Venice, an overtly ironic image that nonetheless shows the salience of social topographical lens to the study of inequality in Los Angeles. Where in LA might we be most likely to find residents attempting to bridge physical and social distance from locations of cultural value, staking claims to parts of the city without ever leaving home? An empirical investigation into such a question would almost certainly start with examining educational attainment, a reliably rough marker of the kind of economic and cultural capital that would classify individuals with fungible claims to the city under neoliberalism and those otherwise lost in the churn. Importantly, though, Black Lives Matter banners are surely not draped on the secluded estates of Beverly Hills or on the ranch homes in the vast, diverse suburbia beyond, indicating the need for a further horizontal mechanism by which to more precisely identify differentiation in the city. That mechanism, as I have shown empirically, is field of study.

But in construction of symbolic boundaries, be it of ostensible *inclusion* in Venice or *exclusion* in the Beverly Hills example from Chapter 3, materiality is not simply tossed out the window. Indeed, part of what made the symbolic boundary-drawing so striking in the example above are the material surroundings—a modern concrete and glass home just off Oakwood Avenue, a Toyota Prius in the driveway, and even the physical size of the banner. At least the most tactile, if not the most visible, material boundaries in Los Angeles remain critical aspects of stratification, boundaries composed and reflective of practices readily identifiable through horizontal differentiation. Here, gentrification is illustrative, nearly ubiquitous across LA, but nonetheless sharpened by a social topographical understanding.



Top-left: Art gallery, Historic Filipinotown; Top-right: Modern condominiums, Historic Filipinotown; Bottom-left: 12-acre multi-use Development, West Adams; Bottom-left: Office tower construction adjacent to the Expo Line, Culver City.

Figure 6.4: Gentrification Emblems Across Los Angeles, January 2021

The emblems of gentrification in LA are visible even from the isolation of a car cabin on the 405, material claims to the city capitalized by real estate speculators and gentrifiers, alike, and sensory signals about what kinds of people and practices are welcome in which geographic places. The art gallery has become a material representation of gentrification in the city surely recognized by residents untrained in urban studies literature—let alone the displaced or those at risk of displacement—often conspicuously inhabiting otherwise accessible spaces (e.g., industrial parks, boulevards) in older neighborhoods close to the city center. As shown in Figure 6.4, pedestrians and drivers on Beverly Boulevard in Historic Filipinotown are met with the kitschy facade of an art gallery on a relatively unassuming mid-century city block, at once appropriating the aesthetics of the neighborhood and standing out, not unlike the unintentional commodification of graffiti on Manhattan's Lower East Side in the late twentieth century (Mele, 2000). While material trends like galleries and public art are not new components of gentrification processes in Los Angeles by any stretch, how can a social topographical lens tell us something new about such practices and how is field of study used to do so?

A map of art museums and galleries offers a general spatial orientation of a city's artistic culture as such, but Richer (2015) explains that a social topography incorporates "beliefs, practices, and identities" (p. 362) in order to uncover expressive dynamics of a given place. Linking field of study, a delimiter inscribed with a formal volume of cultural capital, to places (at multiple scales, from the school to the neighborhood to the region) attempts to expose those dynamics in the same manner that one might locate any other feature of the city on a map. From there, we can draw inferences based on patterns that emerge. For example, the positive relationship between arts/communications degree holders and gentrification and the number of arts courses taken by a community college student and their likelihood of living in a gentrified neighborhood shows not only correlation between people and places, but illuminates how the aesthetic disposition functions as a spatially-contingent mechanism of inequality in Los Angeles. Likewise, the construction of modern homes, apartments, and retail and office space shown in the other panels of Figure 6.4 is not simply a result of unidirectional supply or demand, but rather, part and parcel of a social topography derived from reproduced practices of individuals with disproportionate economic and cultural capital, i.e., members of the dominant class. At the risk of reducing all findings here, descriptive and correlational, to a reaffirmation of Bourdieu's theory of culture, Richer's (2015) social topographical framework also highlights the discursive practices⁵ that allow for a fair amount of creativity in thinking about the arrangement of people and neighborhoods in Los Angeles and how they might be used to estimate what is to come.

Imagine life in LA County's 2,000-plus census tracts in the next decade or two-public parks and parking lots free of vaccine-seekers, strip malls and shopping centers teeming with maskless patrons, freeways and surface streets east-to-west jammed for six hours in the morning and night, a new art gallery exhibiting Black art in an overlooked section of the metropolis. Demographers might eschew imagined hypotheticals and point to the annual release of American Community Survey results for insights into the future of LA, tracking year-over-year shifts in variables like immigrant populations, housing stock, and income to assess changes to the hundreds of communities that comprise the metropolitan statistical area. Policymakers surely engage in forecasting the urban form, typically professing unyielding optimism for the children and workers of the city's communities of color or warning of imminent catastrophe in the suburbs, depending on constituency and incumbency status. And Hollywood, of course, extrapolates from the familiar sights and sounds of the city in depictions of Los Angeles in the near and distant future, be it a dense, Japanese-conquered, post-post-industrial corporate-controlled wasteland in Ridley Scott's Blade Runner (1982) or a dense, stylish, post-post-modern technology-controlled wonderland in Spike Jonze's Her (2013).

⁵i.e., described by Richer, "that mobilize place names as descriptors of status values that confer social rank upon the people for whom they speak" (2015, p. 350), but elsewhere could refer broadly to practices by which knowledge is constructed (Bacchi & Bonham, 2014) or by which linguistic translation of knowledge-to-meaning occurs (Wetherell, 2007), those *inculcations* that slip through the sieve of a sort of self-actualization of habitus upon which social structures are remade and reinforced (Bourdieu, 1977, p. 20). Here, a point about expounding on the philosophical foundations of adjacent esoterica from critical theory—such a task is well beyond the scope of this dissertation. For additional context on practice, specifically, I encourage reading of cited texts, or perhaps for the most inclusive background on how practice is interpreted in this study, Bourdieu's *Outline of a Theory of Practice*.

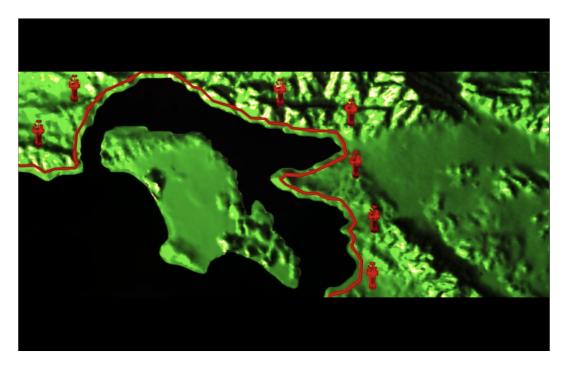


Figure 6.5: Los Angeles as Post-Apocalyptic Penal Colony in John Carpenter's *Escape from L.A.* (1996)

Perhaps John Carpenter's *Escape from L.A.* (1996) best approximates Southern California's fate, though, in it the city depicted as an Alcatraz-like fortress unmoored from the mainland by an earthquake and deemed fit for only immoral outcasts and miscreants by the country's ascendent far-right dictator. Whether applied in a policy paper or academic journal or fantastically in science fiction films, predicting the future of Los Angeles draws on the same discursive principles that color life and geographic interpretation in the contemporary city. Chiefly, such principles do not simply reflect age-old binaries—i.e., the urban and the periphery, the West Coast from the East Coast—but a much more expansive understanding of the region and the diverse practices of its residents. Reinforcing that understanding is a great cataloguing—of people in places, of buildings, of meanings—a process by which individuals code, reproduce, and emplace the stratifications that exist in the speech, minds, media, symbols, and cultures of ordinary people. Arriving at a recognition of LA's social topographical layout to baseline predictions from thus necessitates

interpretation of the extant catalogue(s) of people, places, infrastructure, and meanings. As I have aimed to show above, field of study provides one avenue into that recognition, of describing the broader ordering of urban practices produced and reproduced through the status inequalities governing everyday life. It follows that further investigation using field of study as a variable in research—or in policy, film, or other discursive mediums—will provide a vision of past, present, and future Los Angeles more in touch with its lateral divisions.

Mechanics of Field of Study, Mobility, and Institutional Considerations

Importantly, field of study does not in and of itself contain intelligent properties exogenous to the structure within which it provides insights on the city's social topography. From a spatial perspective, the places where Angelenos obtain degrees in various fields of study would seem to warrant concluding thoughts when reflecting on its usefulness as an analytical lens. Consideration of whether field of study was a useful indicator of residential preferences *during* the process of obtaining a degree was a critical aim of this study and the positive relationship between the number of arts courses that *current students* were enrolled in and gentrification suggests that horizontal stratification is not simply a feature of the city that is observable after or as a result of obtaining a bachelor's degree. But the strength of that observation comes up against an obvious form of stratification that can muddle interpretation and applies to both contemporary students and those with degrees—stratification by institution. While degree holders in ACS data come from all types of bachelor's degree-granting colleges and universities, unobserved are the types of institutions, let alone the more subjective status or prestige of institutions from which those degrees were awarded. Likewise, student data used in this study was from a single community

college, a well-represented institution type in the county, but hardly representative. With nearly an entire academic year of remote learning taking place in 2020-2021 at most colleges in Los Angeles County and those across the country that send their graduates to LA, the socio-spatial dynamics of higher education specialization and stratification and connections to residential behaviors offer a particularly timely topic of investigation.

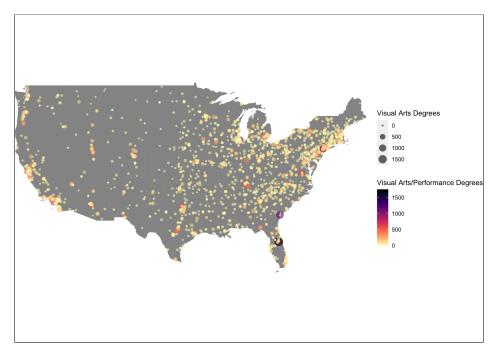


Figure 6.6: Visual Arts/Performance Degrees Awarded, 2019

A rough analysis of IPEDS data shows nearly 110,000 associate's and bachelor's degrees awarded in visual and performing arts disciplines across more than 2,000 institutions in 2019, depicted visually in Figure 6.6. The expanse of credentialing in the arts and other fields across the globe is inextricable from specific patterning in Los Angeles, especially in fields closely linked to industries with wide footprints in the region like entertainment and aerospace. Implications from the connectedness of the country's higher education system on the city's broader social topography are evident in descriptive findings from the analysis above, be they rates of unemployment, in-migration, or commercial development. Certainly established, then, is the role that field of study plays in the ordering of individuals across an urban region and how it can be used to investigate aspects of the city's geography. Perhaps less established in this study's maps, raw data tables, and course catalogues, though, are the interactions of that geography and the psychosocial mechanisms underpinning academic specialization.

Specifically, the notion of social mobility is a pressing theoretical and empirical question demanded by the findings and theory explored in depth as yet. Not unlike New York, Paris, or Tokyo, Los Angeles has for over a century been a destination for individuals looking to improve their socioeconomic position in the world, especially through participation in the arts. We know from prior studies that those in creative majors prefer urban areas (Woldoff et al., 2011) and that affluent college students from urban areas are likely to flock to coastal cities after graduation (Armstrong & Hamilton, 2013), and from this study, that art students prefer gentrifying neighborhoods, but what about processes beyond the scope of controls in regression models? How might the unobserved mobility dynamics undergirding those relationships be interrogated?

Compelling research from Daenekindt and Roose (2013) reaffirm a hypothesis from Bourdieu's *Distinction*, in which the authors test the influence of prior social position and social trajectory on aesthetic proclivities and discover that each matters to affinity for dominant high culture. A downwardly mobile artist from a wealthy family, for instance, is likely to maintain their appreciation for high status creative consumption (contra lowbro popular culture), as to a partial extent are upwardly mobile individuals from relatively lower social positions (Daenekindt & Roose, 2013). The activation of habitus, as it is, is necessarily dependent on an individual's exposure to a broader social structure and its constituent parts within that structure with which they are forced to respond, be it to a classification problem or with a practical action (i.e., structured structuring; Lizardo, 2004). It follows that field of study can at once act as a lens not only into the past, present, and future ordering of individuals in geographic space, but also speak to the dynamic actions of urban residents. This hypothesis can then address some of the data shortcomings in this study—specifically as to the structures within which Angelenos are structured/ing—and also lay the groundwork for future research.

College students observed in the analysis above and those writ large can be understood as in pursuit of upward mobility, or maintenance of an already elevated social standing, somewhat independent of additional qualifiers. Nonetheless, aspects of identity and/or family (Rivera, 2017), perceptions of groups and individuals (Binder & Abel, 2019; Askin & Bothner, 2016), and (in)formal political economic standards (Reitz, 2017) all affect the possible positions amid intersecting grids of capital that individuals occupy and deviate from over time. The temporal considerations in Bourdieu's social grid heighten how actions are observed and predicted using field of study, given the inflection point of college in the lifespan of most Americans (i.e., average college age of 26, average life expectancy around 77). That is, imprinted on an individual's specialized academic record are a unique combination of social characteristics from the first third of life and the velocity with which future positions in the social space may be obtained in the latter two thirds, a straddling of the formal education system and the labor market that contains a host of geographic considerations. So, while addressing institution type and relative prestige of undergraduate institution could surely add to the richness of studies of horizontal stratification and its manifestation in cities—not unlike the inclusion of a host of other variables or theory that speak to features of the broader social structure, for example, a closer look at the role of gender (Van den Berg, 2018) or municipal politics (Summer, 2020) or technology (León & Rosen, 2020)-it is not a necessary condition for the use of field of study as a analytical tool, be it for study of practical

action or of social structures. This concession is particularly noteworthy for future scholarship, as millions of college students spread out across the world spend hours learning removed from physical classrooms and campuses during the 2020-2021 academic year. Regardless, no amount of belaboring the empirical and theoretical value of field of study is complete without asking what this dissertation and future research can do not only to improve knowledge of the socio-spatial structure of Los Angeles, but to strengthen strategies that could mitigate the unforeseen consequences of its current form.

Implications for Strategy-Education, Housing, and Policy

Part of this dissertation's review of prior literature looks at Los Angeles as an analytical site, a task most often undertaken by researchers, but executed—knowingly or unknowingly—by actors far beyond the confines of the academy. The question of *what do we do with this?* surely looms over the preceding array of intricate maps, lengthy citations, and theoretical webs, perhaps even more so at the pivotal geographic moment brought about by the COVID-19 pandemic. As Figure 6.4 reveals, gentrification still persists in the city despite the tome of research that points to its negative impact on urban life. Freeway Community College, the pseudonymous campus from which data are analyzed above, has seen no in-person instruction for more than a year as of this writing, nor have the nearly one million students enrolled in Los Angeles Unified School District schools. Activists have routinely protested outside Getty House, the official residence of the Los Angeles mayor in Hancock Park, for months, and the city's unhoused population continues to swell. This final discussion section will delve into how information from this dissertation might be used to affect socio-political strategies aimed at correcting the very issues directly and indirectly

touched on previously.

One of the core findings outlined in Chapter 5 showed that while field of study provides unique insight into the ordering, and indeed, practical actions, of millions of Angelenos swirling through the grid of net positive economic and cultural capital, millions more are seemingly stuck below, in neighborhoods that were found to be persistent *cold spots* of degree attainment across fields of study. Racial and economic segregation is especially pronounced in the American education system, with poor and non-white students shouldering its detrimental effects to high school and college attainment (Quillian, 2014). Further, scholars have documented that educational contexts alone cannot solely account for the negative effects of segregated neighborhood environments (Owens, 2010), suggesting that mitigation must be achieved in concert with institutional and political actors whose administrative or advocacy purviews cover aspects of the urban landscape outside of the school system. But given the longstanding acknowledgement tacit or otherwise—of the effects of racial and economic segregation in the city, how have those corrective efforts taken shape and how might findings here be used to further them?

Although Mike Davis wrote of the battle lines drawn over the "Jekyll and Hyde transfiguration of Los Angeles's middle-class heartlands" (Davis, 1992, p. 190) in the 1980s, even he could not have predicted the power dynamics between developers and property owners and their tenants in the early 2020s. Tapp (2019) notes in a review of the most recent edition of Davis' *City of Quartz* that developer-friendly policies—chiefly 1995's Costa-Hawkins Rental Housing Act that defanged the ability of localities to regulate rising rents in California—compounded by the 2008 housing crisis have spurred a potent era of tenant organizing that seeks to reverse rent spikes, homelessness, and by extension, segregation, in California cities. In 2018, statewide Proposition 10 failed to overturn Costa-Hawkins by a 10 percent margin, but votes were split evenly in Los Angeles County. Despite the defeat of Prop 10, rent control has risen to the top of California's political radar and represents perhaps the most significant housing-related political movement aimed at creating a more equitable city (Tapp, 2019). Indeed, the homeowner-renter divide reveals itself in data analyzed in this dissertation, with clear horizontal boundaries that point to possible avenues for socio-political engagement.

Fully half of the LA County population captured in ACS data in 2015 were renters, though those percentages are between 10 and 17 points higher in degree cold spot neighborhoods. Much wider is the range of renters in hot spots, with renter percentages 13 percent above the countywide average in arts/communications degree hot spots in the city's interior and 26 percent below average in the education hot spots clustered at the county edge. Such is the conundrum in neighborhoods with outsized representations of current and former arts students and a causal chain with gentrification that this dissertation cannot thoroughly untangle-i.e., many credentialed creatives in LA share core housing characteristics with residents in segregated communities where educational attainment is low, but those same creatives harbor cultural and aesthetic preferences that put communities at risk through displacement via commodification of predominant aesthetic dispositions by developers. From a pure housing perspective, it is possible that many art degree holders in Hollywood share more with fellow Angelenos in the Antelope Valley than with professional educators who own single-family homes in Pomona. It follows that raising awareness around such disparities and the practices with which developers exploit them could serve to foster solidarity and grow the political coalition of those fighting for equitable housing rights in the city. On the other hand, there still exist very real gaps in the cumulative distribution of capital among Angelenos that inhibits solidarity along any one identity or economic-based variable. Here, the effects of differences in educational attainment present strategic opportunities to foster

a more hospitable Los Angeles for all.

Though discussed in this dissertation and elsewhere as a cohesive urban unit, the nearly-Rhode Island-sized Angeles National Forest separates much of the densest parts of LA from half a million residents in the Antelope Valley. For aspiring college students from Lancaster and Palmdale wishing to attend classes close to home, then, this translates to an hourlong car trip to the nearest California State University campus in Northridge, not that much closer than the Bakersfield campus in neighboring Kern County. The effects of geography on college access have been explored in the research literature ad nauseam, but short of building new campuses, policy changes must rely on more indirect levers with which to mitigate the challenges incurred by space. Naturally, one of the foremost strategies aimed at improving access to students is simply making the existing institutions near home that much more attractive to students. The proliferation of place-based *promise programs* have recently sought to address economic and geographic costs in college attendance, making targeted financial aid available to local students at institutions nearest to their home or high school. California even codified promise programs in state law in its push to make community colleges free, though spatial equity concerns have plagued implementation of the policy known as AB 19 (Rios-Aguilar & Lyke, 2020). What, then, can be done to at once mitigate spatial gaps in access to college and reduce structural barriers impeding the equitable distribution of capital?

Unable to simply build dozens of new Cal State campuses across the state, California higher education leaders under the direction of former Governor Jerry Brown in 2018 established baccalaureate programs at 15 of the more than 100 California Community College System institutions with footprints from Redding to San Diego. Though the pilot bachelor's degree programs have strong, perhaps too strong, vocational orientations as to not overstep the California Master Plan for Higher Education that delineates specific roles for the community college, Cal State, and University of California systems, the spatial potential of such programs are undeniable. As it is, one of the institutions piloting baccalaureates is Antelope Valley College. And while students in Lancaster wishing to spend four years working towards a degree in something besides the automotive tech program offered at the community college will have to venture south of the San Gabriel Mountains or outside LA County entirely, the prospect of expanding four-year degree access to every corner of the Los Angeles metropolitan area would unquestionably alter the socio-spatial grid holding it all together. If such policies are to be enacted, in education, in housing, or in other areas under state, county, and municipal control, understanding the horizontal divisions within and between the region's thousands of neighborhoods is paramount.

Conclusion

In March of 2021, the University of California system announced that all ten of its institutions would hold in-person classes at the start of the 2021-2022 academic year. Students will once again file down the famed Janss Steps on the UCLA campus and into massive lectures or intimate theory seminars, and while interpersonal interactions are sure to look different, other practices will remind us that remnants of social life from before the coronavirus pandemic persist. Indeed, on those first days of in-person classes, professors and TAs will prompt students to declare *name*, *major*, *and where you're from*, triggering familiar strategy-generating processes that motivate classification and practical action. This study has revealed that within those responses are patterns that can explain the urban form of Los Angeles and the behaviors of its residents; in the overwhelming quest to expand rights to the city, researchers ought to continue to use field of study to further knowledge and practice that can affect that goal.

Appendix A: Spatial Dependence and Weighting

Moran's *I* Tests

Field of Study Variable	Moran's I	Moran's I
	k = 3	k = 5
Arts/Communications Degrees	0.816***	0.791***
Sciences Degrees	0.604^{***}	0.590***
Social Sciences Degrees	0.728^{***}	0.723***
Engineering/Comp Sci Degrees	0.682***	0.659***
Humanities Degrees	0.706^{***}	0.694***
Education Degrees	0.364^{***}	0.363***
Business Degrees	0.659***	0.643***

*** p < .001 based on 1,000 simulations.

 Table A.1: Moran's I Tests, Field of Study Variables

k=3 Near-Neighbor Weighting Scheme

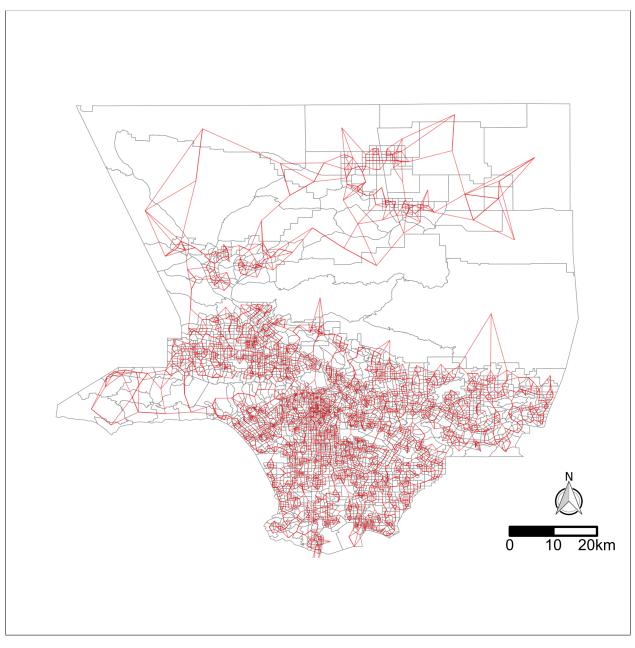


Figure A.1: k = 3 Near-Neighbor Weighting, LA County Census Tracts 2015

Appendix B: Field of Study Cluster Descriptive Tables and

Miscellaneous

Visual Arts/Communications

Variable	Levels	n	$\bar{\mathbf{x}}$	s
Total Population	HH	162	3917.06	1290.45
	LL	201	4566.73	1518.37
	LH	2	2736.50	3862.92
	NOTSIG	1961	4358.89	1533.02
% Asian	HH	162	10.18	7.58
	LL	201	3.17	7.41
	LH	2	30.77	41.34
	NOTSIG	1961	15.81	16.43
% Black	HH	162	5.00	4.44
	LL	201	11.00	13.85
	LH	2	26.25	37.13
	NOTSIG	1961	7.99	12.73
% Latinx	HH	162	15.81	10.75
/ Dutilia	LL	201	82.33	15.31
	LL	201	30.17	13.90
	NOTSIG	1961	47.00	
o White				27.42
% White	HH	162	73.58	12.29
		201	47.79	16.70
	LH	2	26.10	8.63
	NOTSIG	1961	50.73	20.38
% Born Outside US	HH	162	25.84	9.23
	LL	201	39.00	8.76
	LH	2	25.89	19.96
	NOTSIG	1961	34.69	13.99
Median Age	HH	162	39.13	4.89
	LL	201	30.23	3.83
	LH	2	36.65	22.84
	NOTSIG	1959	37.33	6.53
% Below Poverty Line	HH	162	1.05	1.33
Delew Foverty Enic	LL	201	11.17	5.36
	LH	2	0.40	0.57
	NOTSIG	1961	4.74	4.56
Median Income (\$)	HH	162	48484.47	14300.02
	LL	201	19047.22	3354.71
	LL LH	201	8827.00	5554.71 NA
	NOTSIG	1956	30198.14	13822.90
" Unemployed	HH			
% Unemployed		162	4.79	2.00
		201	4.43	1.69
	LH	2	13.75	8.84
<u></u>	NOTSIG	1961	3.93	1.77
Gini Index	HH	162	0.49	0.05
	LL	201	0.41	0.05
	LH	1	0.49	NA
	LH NOTSIG	1 1950	0.49 0.43	NA 0.06
% In-Migration Previous Year				
% In-Migration Previous Year	NOTSIG	1950	0.43	0.06
% In-Migration Previous Year	NOTSIG HH	1950 162	0.43 4.32	0.06
% In-Migration Previous Year	NOTSIG HH LL	1950 162 201	0.43 4.32 0.64	0.06 3.28 0.73
-	NOTSIG HH LL LH NOTSIG	1950 162 201 2 1961	0.43 4.32 0.64 12.40 1.69	0.06 3.28 0.73 10.75 2.22
% In-Migration Previous Year % K-12 Students	NOTSIG HH LL LH NOTSIG HH	1950 162 201 2 1961 162	0.43 4.32 0.64 12.40 1.69 8.43	0.06 3.28 0.73 10.75 2.22 4.70
-	NOTSIG HH LL LH NOTSIG HH LL	1950 162 201 2 1961 162 201	0.43 4.32 0.64 12.40 1.69 8.43 22.15	0.06 3.28 0.73 10.75 2.22 4.70 4.26
-	NOTSIG HH LL LH NOTSIG HH LL LH	1950 162 201 2 1961 162 201 2	$\begin{array}{r} 0.43 \\ 4.32 \\ 0.64 \\ 12.40 \\ 1.69 \\ \hline 8.43 \\ 22.15 \\ 0.69 \\ \end{array}$	0.06 3.28 0.73 10.75 2.22 4.70 4.26 0.97
% K-12 Students	NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG	1950 162 201 2 1961 162 201 2 1961	$\begin{array}{r} 0.43\\ 4.32\\ 0.64\\ 12.40\\ 1.69\\ 8.43\\ 22.15\\ 0.69\\ 16.27\\ \end{array}$	0.06 3.28 0.73 10.75 2.22 4.70 4.26 0.97 5.03
-	NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG HH	1950 162 201 2 1961 162 201 2 1961 162	0.43 4.32 0.64 12.40 1.69 8.43 22.15 0.69 16.27 4.61	0.06 3.28 0.73 10.75 2.22 4.70 4.26 0.97 5.03 3.01
% K-12 Students	NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG	1950 162 201 2 1961 162 201 2 1961	$\begin{array}{r} 0.43\\ 4.32\\ 0.64\\ 12.40\\ 1.69\\ 8.43\\ 22.15\\ 0.69\\ 16.27\\ \end{array}$	0.06 3.28 0.73 10.75 2.22 4.70 4.26 0.97 5.03

	NOTSIG	1961	7.43	7.01
% Bachelors Degree	HH	162	54.20	10.59
	LL	201	4.80	3.26
	LH	2	4.35	6.16
	NOTSIG	1961	22.24	15.83
% Social Sciences Degree	HH	162	9.67	3.39
U	LL	201	0.78	0.72
	LH	2	0.45	0.63
	NOTSIG	1961	3.49	3.18
% Engineering/CS Degree	HH	162	3.98	1.93
	LL	201	0.48	0.56
	LH	2	0.43	0.61
	NOTSIG	1961	2.82	2.59
% Sciences Degree	HH	162	6.54	2.66
	LL	201	0.67	0.64
	LH	2	0.73	1.03
	NOTSIG	1961	3.74	3.11
% Humanities Degree	HH	162	7.87	3.08
	LL	201	0.48	0.51
	LH	2	0.42	0.59
	NOTSIG	1961	2.54	2.33
% Visual Arts/Communications Degree	HH	162	14.93	4.66
	LL	201	0.41	0.55
	LH	2	0.43	0.61
	NOTSIG	1961	3.00	3.10
% Education Degree	HH	162	1.78	1.02
	LL	201	0.50	0.49
	LH	2	0.10	0.14
	NOTSIG	1961	1.41	1.14
% Business Degree	HH	162	7.87	3.28
	LL	201	0.96	0.92
	LH	2	1.55	2.20
	NOTSIG	1961	4.19	3.22
Total Housing Units	HH	162	140.05	23.83
	LL	200	100.16	20.24
	LH	1	114.00	NA
	NOTSIG	1948	119.79	29.77
Median Year Structures Built	HH	162	1959.90	13.59
	LL	200	1954.67	10.40
	LH	1	1958.00	NA
	NOTSIG	1917	1962.37	13.14
% Renters	HH	162	62.14	24.42
	LL	201	59.84	18.33
	LH	2	22.75	32.17
	NOTSIG	1961	49.03	26.02
Gross Rent (\$)	HH	161	1759.68	424.69
	LL	201	1105.81	198.42
	LH	1	306.00	NA
	NOTSIG	1935	1495.01	504.65
% Commute Using Public Transit	HH	162	2.84	2.41
		201	3.64	2.30
	LH	2	4.37	6.18
07 Commuto > 1 Haven	NOTSIG	1961	3.07	3.87
% Commute \geq 1 Hour	HH	162	4.83	2.49
	LL	201	5.30	2.16
	LH NOTSIG	2 1961	2.11 6.09	2.99
Total Bars	HH	1961		2.76
10tal Dals	HH LL		2.06	2.91
	LL LH	201 2	0.31	0.64
	LH NOTSIG	2 1961	0.00 0.70	0.00
Total Restaurants	HH			1.29
Iotal Restaurants	HH LL	162 201	14.83	15.44
	LL LH	201 2	5.03 7.00	10.60 4.24
	LH NOTSIG	2 1961	7.00 7.69	4.24 9.03
		1 201	1.07	2.05
Total Coffee Shops				
Total Coffee Shops	HH	162 201	2.04 0.49	2.57 1.37

	LH	2	0.50	0.71
	NOTSIG	1961	0.85	1.58
Total Grocery Stores	HH	162	2.57	2.47
	LL	201	3.14	2.85
	LH	2	4.00	5.66
	NOTSIG	1960	2.31	2.32
Total Clothing Stores	HH	162	16.38	55.67
	LL	201	5.53	14.65
	LH	2	14.00	19.80
	NOTSIG	1960	5.64	24.74
Total Specialty Food Stores	HH	162	1.45	1.71
	LL	201	1.31	2.33
	LH	2	3.50	4.95
	NOTSIG	1960	1.00	2.42
Total Museums	HH	162	1.39	2.09
	LL	201	0.12	0.46
	LH	2	1.50	2.12
	NOTSIG	1960	0.34	0.88
Total Artistic Groups	HH	162	9.14	7.78
	LL	201	0.33	0.73
	LH	2	2.50	0.71
	NOTSIG	1960	1.85	4.48
Total Sports Stadiums	HH	162	0.30	0.56
-	LL	201	0.09	0.35
	LH	2	0.00	0.00
	NOTSIG	1960	0.20	0.54
Total Libraries	HH	162	0.44	0.75
	LL	201	0.15	0.37
	LH	2	0.00	0.00
	NOTSIG	1960	0.25	0.65
Total Golf Courses/Country Clubs	HH	162	0.04	0.22
	LL	201	0.01	0.10
	LH	2	0.50	0.71
	NOTSIG	1960	0.06	0.29

 Table B.1: Characteristics of Arts/Communication Clusters

Sciences

Variable	Levels	n	$\bar{\mathbf{x}}$	s
Total Population	HH	104	4154.50	1399.06
	LL	212	4503.70	1283.71
	LH	7	3713.43	1329.87
	NOTSIG	2003	4339.93	1552.23
% Asian	HH	104	21.63	17.58
	LL	212	1.43	4.18
	LH	7	12.10	11.16
	NOTSIG	2003	15.33	15.87
% Black	HH	104	3.45	3.39
	LL	212	10.90	13.41
	LH	7	9.32	12.10
	NOTSIG	2003	7.99	12.66
% Latino	HH	104	12.22	7.24
	LL	212	84.71	14.60
	LH	7	39.89	21.57
	NOTSIG	2003	45.85	27.05
% White	HH	104	66.42	19.56
	LL	212	49.30	17.35
	LH	7	59.44	10.37
	NOTSIG	2003	51.56	20.61
% Born Outside US	HH	104	28.84	11.31
	LL	212	40.02	8.17
	LH	7	25.53	8.09
	NOTSIG	2003	34.17	13.98
% Below Poverty Line	HH	104	1.19	1.38

			10.05	= 0.4
	LL LH	212	10.97	5.01
	NOTSIG	7 2003	2.10 4.62	1.44 4.60
Aedian Income (\$)	HH	104	53641.73	16096.33
	LL	212	18805.70	3400.39
	LH	7	27225.14	15409.80
	NOTSIG	1997	30547.44	13666.72
Unemployed	HH	104	3.10	1.43
1 /	LL	212	4.61	1.69
	LH	7	4.10	1.05
	NOTSIG	2003	4.03	1.84
ini Index	HH	104	0.47	0.06
	LL	212	0.41	0.05
	LH	7	0.48	0.09
	NOTSIG	1991	0.43	0.06
Commute Using Public Transit	HH	104	1.92	2.03
	LL	212	4.07	2.56
	LH	7	2.87	1.52
<u> </u>	NOTSIG	2003	3.06	3.83
Commute \geq 1 Hour	HH	104	4.33	2.67
	LL	212	5.22	1.96
	LH NOTSIG	7 2003	4.53 6.09	2.53 2.76
dian Aga				
edian Age	HH LL	104 212	42.06 29.93	6.51 3.52
	LL LH	212 7	29.93 36.87	3.52 9.92
	NOTSIG	2001	37.30	6.32
K-12 Students	HH	104	12.74	5.72
C12 Students	LL	212	22.18	3.89
	LH	7	10.59	7.81
	NOTSIG	2003	15.78	5.37
College Students	HH	104	5.57	4.00
% College Students	LL	212	6.55	2.75
	LH	7	17.10	26.97
	NOTSIG	2003	7.30	7.06
achelors Degree	HH	104	53.14	10.01
5	LL	212	4.26	3.01
	LH	7	27.14	21.43
	NOTSIG	2003	23.34	16.63
ocial Sciences Degree	HH	104	10.30	3.84
	LL	212	0.72	0.77
	LH	7	4.97	4.44
	NOTSIG	2003	3.65	3.25
ngineering/CS Degree	HH	104	6.62	2.66
	LL	212	0.46	0.58
	LH	7	2.36	1.61
	NOTSIG	2003	2.73	2.41
ciences Degree	HH	104	8.92	2.63
	LL	212	0.60	0.57
	LH	7	2.62	1.05
	NOTSIG	2003	3.72	2.97
Iumanities Degree	HH	104	6.92	2.87
		212	0.43	0.46
	LH	7	4.37	3.88
nto/Communications Dom	NOTSIG	2003	2.75	2.61
arts/Communications Degree	HH	104	7.79	3.75
	LL LH	212	0.38	1.02
		7 2003	6.54 3.72	8.56
ducation Degree	NOTSIG HH	2003	3.72	4.46
succation Degree	HH LL	104 212	2.19	1.08
	LL LH	212 7	0.45 1.50	0.47
	NOTSIG	2003		0.97
Business Degree	HH	104	1.41 8.92	1.12
Jushicos Deglee	пп LL	104 212	8.92 0.74	2.40 0.67
	- שיש			
	LH	7	4 10	///
	LH NOTSIG	7 2003	4.10 4.28	2.70 3.24

Total Housing Units Median Year Structures Built	HH LL LH NOTSIG	104 211 6 1990	139.21 96.86 130.83	28.94 18.64 38.80
Median Year Structures Built	LH NOTSIG	6	130.83	38.80
Median Year Structures Built	NOTSIG			
Median Year Structures Built		1990		
Median Year Structures Built	TTTT		120.84	29.42
	HH	104	1966.88	10.60
	LL LH	212	1952.68	8.74
		7	1963.00	7.70
of Development	NOTSIG	1957	1962.18	13.27
% Renters	HH	104	43.49	28.19
	LL	212	63.04	16.20
	LH	7	51.61	34.98
Gross Rent (\$)	NOTSIG HH	2003	49.94	25.99 495.15
Gloss Rein (\$)	LL	103 212	2106.31 1103.92	493.13 188.24
	LH	212	1470.14	247.15
	NOTSIG	, 1976	1486.56	487.04
% In-Migration Previous Year	HH	104	3.89	3.00
% in-wigration rievious rear	LL	212	0.64	0.80
	LH	7	3.71	3.30
	NOTSIG	2003	1.80	2.37
Total Bars	HH	104	1.14	1.60
Total Dars	LL	212	0.27	0.64
	LH	7	0.27	0.38
	NOTSIG	2003	0.80	1.51
Total Restaurants	HH	104	13.75	14.41
Total Acstaurants	LL	212	4.25	6.89
	LH	7	5.14	6.57
	NOTSIG	2003	8.05	9.79
Total Coffee Shops	HH	104	1.76	2.08
Total Collect Shops	LL	212	0.45	1.25
	LH	7	1.00	1.00
	NOTSIG	2003	0.91	1.68
Total Grocery Stores	HH	104	2.33	2.39
Total Grocery Stores	LL	212	3.20	3.22
	LH	7	1.14	1.21
	NOTSIG	2002	2.32	2.27
Total Clothing Stores	HH	104	10.88	24.26
	LL	212	9.19	67.60
	LH	7	2.00	2.83
	NOTSIG	2002	5.87	19.09
Total Specialty Food Stores	HH	104	1.44	2.26
1 7	LL	212	1.59	5.90
	LH	7	1.00	1.29
	NOTSIG	2002	0.99	1.61
Total Museums	HH	104	0.88	1.52
	LL	212	0.14	0.58
	LH	7	0.29	0.76
	NOTSIG	2002	0.40	1.02
Total Artistic Groups	HH	104	5.88	10.93
-	LL	212	0.33	0.61
	LH	7	2.14	2.34
	NOTSIG	2002	2.24	4.66
Total Sports Stadiums	HH	104	0.40	0.74
	LL	212	0.08	0.32
	LH	7	0.71	0.76
	NOTSIG	2002	0.19	0.53
Total Libraries	HH	104	0.50	0.88
	LL	212	0.13	0.37
	LH	7	0.00	0.00
	NOTSIG	2002	0.26	0.65
	110 1010			
Total Golf Courses/Country Clubs	HH	104	0.12	0.39
Total Golf Courses/Country Clubs	HH LL	104 212	0.12 0.00	0.39 0.07
Total Golf Courses/Country Clubs	HH			

 Table B.2: Characteristics of Sciences Degree Clusters

Social Science Degree Clusters

Variable	Levels	n	$\bar{\mathbf{x}}$	\mathbf{s}
Total Population	HH	168	4151.85	1442.66
	LL	174	4421.09	1342.74
	LH	3	1972.33	803.14
	HL	3	3009.33	2556.02
or Asian	NOTSIG HH	1978	4359.96	1540.51
% Asian	пп LL	168 174	11.50 3.11	7.97 5.92
	LH	3	7.17	2.22
	HL	3	11.54	6.34
	NOTSIG	1978	15.58	16.53
% Black	HH	168	3.50	3.54
	LL	174	10.20	11.26
	LH	3	21.19	14.29
	HL	3	7.67	9.64
	NOTSIG	1978	8.24	13.02
% Latino	HH	168	11.88	7.61
	LL	174	82.66	13.11
	LH	3	35.85	18.19
	HL	3	54.52	23.27
	NOTSIG	1978	47.87	27.33
% White	HH	168	76.35	11.85
	LL	174	48.06	17.24
	LH	3	45.48	13.36
	HL	3	40.39	13.88
	NOTSIG	1978	50.36	20.04
% Born Outside US	HH	168	24.27	8.76
	LL	174	40.09	8.54
	LH	3	32.52	18.55
	HL	3	24.61	10.47
	NOTSIG	1978	34.83	13.86
Median Age	HH	168	40.53	6.16
	LL	174	30.10	3.75
	LH	3	39.87	13.12
	HL	3	39.60	2.71
	NOTSIG	1976	37.11	6.42
% Below Poverty Line	HH	168	0.97	1.21
	LL	174	11.51	5.54
	LH	3	4.91	3.46
	HL	3	1.38	1.26
	NOTSIG	1978	4.82	4.58
Median Income (\$)	HH LL	168 174	56504.26	15643.60
	LH	3	18641.74 14689.67	3055.33 3788.29
	HL	3	36066.33	4765.48
	NOTSIG	1972	29346.21	12419.85
% Unemployed	HH	168	3.61	1.68
% enemployed	LL	174	4.65	1.75
	LH	3	4.77	0.71
	HL	3	5.57	3.22
	NOTSIG	1978	4.02	1.83
Gini Index	HH	168	0.50	0.05
Gini Index				
onn mucx	LL	174	0.42	0.05
		174 3	0.42 0.50	0.05 0.03
	LL			
	LL LH	3	0.50	0.03
% In-Migration Previous Year	LL LH HL	3 3	0.50 0.46	0.03 0.13
	LL LH HL NOTSIG	3 3 1966	0.50 0.46 0.43	0.03 0.13 0.06
	LL LH HL NOTSIG HH	3 3 1966 168	0.50 0.46 0.43 4.06	0.03 0.13 0.06 2.90
	LL LH HL NOTSIG HH LL	3 3 1966 168 174	0.50 0.46 0.43 4.06 0.62	0.03 0.13 0.06 2.90 0.72
	LL LH HL NOTSIG HH LL LH	3 3 1966 168 174 3	0.50 0.46 0.43 4.06 0.62 8.72	0.03 0.13 0.06 2.90 0.72 4.97
	LL LH HL NOTSIG HIH LL LH HL	3 3 1966 168 174 3 3	$0.50 \\ 0.46 \\ 0.43 \\ 4.06 \\ 0.62 \\ 8.72 \\ 1.15 \\ 0.51 \\ $	0.03 0.13 0.06 2.90 0.72 4.97 1.24
% In-Migration Previous Year	LL LH HL NOTSIG HH LL LH HL NOTSIG	3 3 1966 168 174 3 3 1978	$\begin{array}{c} 0.50\\ 0.46\\ 0.43\\ \hline 4.06\\ 0.62\\ 8.72\\ 1.15\\ 1.69\\ \end{array}$	0.03 0.13 0.06 2.90 0.72 4.97 1.24 2.29
% In-Migration Previous Year	LL LH HL NOTSIG HH LL LH HL NOTSIG HH	3 3 1966 168 174 3 3 1978 168	$\begin{array}{c} 0.50\\ 0.46\\ 0.43\\ \hline 4.06\\ 0.62\\ 8.72\\ 1.15\\ 1.69\\ \hline 10.79\\ \end{array}$	0.03 0.13 0.06 2.90 0.72 4.97 1.24 2.29 5.80

	NOTSIG	1978	16.15	5.22
% College Students	HH	168	4.83	5.42
	LL	174	6.41	1.62
	LH	3	11.20	12.65
	HL	3	4.07	2.04
	NOTSIG	1978	7.45	7.17
% Bachelors Degree	HH	1078	57.03	8.69
% Bachelors Degree				
	LL	174	4.61	2.99
	LH	3	19.53	10.57
	HL	3	20.36	5.73
	NOTSIG	1978	21.67	15.36
% Social Sciences Degree	HH	168	11.32	3.09
	LL	174	0.76	0.58
	LH	3	1.84	1.20
	HL	3	4.45	0.67
	NOTSIG	1978	3.29	2.86
% Engineering/CS Degree	HH	168	5.28	2.54
// Engineering/ 00 Degree	LL	174	0.54	0.65
	LH	3	1.88	0.03
	HL	3	1.43	1.25
	NOTSIG	1978	2.67	2.47
% Sciences Degree	HH	168	8.09	2.77
	LL	174	0.74	0.79
	LH	3	3.03	1.02
	HL	3	4.32	2.55
	NOTSIG	1978	3.55	2.94
% Humanities Degree	HH	168	8.05	2.73
0	LL	174	0.44	0.46
	LH	3	2.34	2.58
	HL	3	1.32	1.15
m Auto/Occurrenti ti D	NOTSIG	1978	2.48	2.30
% Arts/Communications Degree	HH	168	11.86	4.82
	LL	174	0.37	0.48
	LH	3	4.86	4.77
	HL	3	1.88	1.38
	NOTSIG	1978	3.19	3.79
% Education Degree	HH	168	1.98	1.09
U	LL	174	0.43	0.42
	LH	3	1.24	0.74
	HL	3	1.51	1.46
	NOTSIG	1978	1.31	1.12
m Desta Desta				
% Business Degree	HH	168	8.87	3.20
	LL	174	0.89	0.79
	LH	3	3.65	0.86
	HL	3	3.45	3.18
	NOTSIG	1978	4.05	3.11
Total Housing Units	HH	167	143.03	24.22
	LL	174	98.47	20.31
	LH	2	100.00	5.66
	HL	2	140.00	35.36
	NOTSIG	1966	119.37	29.42
Median Year Structures Built	HH	168	1963.09	12.36
median rear offactures Dunt	LL			
		174	1956.71	11.44
	LH	3	1955.33	11.37
	HL	3	1957.00	4.00
	NOTSIG	1932	1961.83	13.27
% Renters	HH	168	52.04	26.18
	LL	174	62.76	18.10
	LH	3	61.75	48.74
	HL	3	44.89	17.55
			49.69	25.95
		1978		
Gross Rent (\$)	NOTSIG	1978 167		479.31
Gross Rent (\$)	NOTSIG HH	167	2016.79	479.31
Gross Rent (\$)	NOTSIG HH LL	167 174	2016.79 1110.44	180.48
Gross Rent (\$)	NOTSIG HH LL LH	167 174 3	2016.79 1110.44 1032.67	180.48 274.22
Gross Rent (\$)	NOTSIG HH LL LH HL	167 174 3 3	2016.79 1110.44 1032.67 1188.00	180.48 274.22 497.77
Gross Rent (\$) % Commute Using Public Transit	NOTSIG HH LL LH	167 174 3	2016.79 1110.44 1032.67	180.48 274.22

	LL	174	3.82	2.97
	LH	3	10.40	5.94
	HL	3	1.22	1.15
	NOTSIG	1978	3.13	3.81
% Commute \geq 1 Hour	HH	168	3.99	2.39
	LL	174	5.62	2.73
	LH	3	5.59	2.49
	HL	3	4.94	0.74
	NOTSIG	1978	6.13	2.69
Total Bars	HH	168	1.80	2.29
	LL	174	0.36	0.75
	LH	3	3.00	3.46
	HL	3	1.67	1.53
	NOTSIG	1978	0.71	1.38
Total Restaurants	HH	168	15.67	16.47
	LL	174	4.65	5.58
	LH	3	10.67	6.03
	HL	3	13.67	10.79
	NOTSIG	1978	7.58	9.19
Total Coffee Shops	HH	168	1.96	2.58
-	LL	174	0.47	0.98
	LH	3	0.67	0.58
	HL	3	2.33	2.52
	NOTSIG	1978	0.85	1.60
Total Grocery Stores	HH	168	2.57	2.57
,	LL	174	3.24	2.64
	LH	3	2.00	2.00
	HL	3	7.00	7.81
	NOTSIG	1977	2.30	2.32
Total Clothing Stores	HH	168	15.12	36.15
	LL	174	5.63	12.79
	LH	3	53.67	86.96
	HL	3	52.67	86.90
	NOTSIG	1977	5.57	27.13
Total Specialty Food Stores	HH	168	1.49	2.10
Total openanty Tool eteres	LL	174	0.97	1.51
	LH	3	0.33	0.58
	HL	3	7.67	13.28
	NOTSIG	1977	1.03	2.41
Total Museums	HH	168	1.32	1.83
	LL	174	0.10	0.37
	LH	3	0.00	0.00
	HL	3	1.33	1.53
	NOTSIG	1977	0.35	0.92
Total Artistic Groups	HH	168	9.57	13.21
Groups	LL	103	0.35	0.62
	LH	3	2.00	1.73
	HL	3	1.67	1.53
	NOTSIG	1977	1.77	3.08
Total Sports Stadiums	HH	168	0.40	0.72
real oporto otaciunio	LL	103	0.40	0.35
	LH	3	0.33	0.58
	HL	3	1.00	1.73
	NOTSIG	1977	0.18	0.51
Total Libraries	HH	168	0.13	0.79
Lotar Elbrarios	LL	108	0.47	0.79
	LH	3	0.10	0.45
	HL	3	0.55	0.58
	NOTSIG	1977	0.87	0.58
Total Golf Courses/Country Clubs	HH	168		
Total Goli Courses/Country Clubs	LL	168	0.11	0.36
	LL LH		0.01	0.11
	HL	3 3	0.00	0.00
			0.00	0.00
	NOTSIG	1977	0.06	0.28

 Table B.3: Characteristics of Social Science Degree Clusters

Engineering/Computer Sciences

Variable	Levels	n	$\bar{\mathbf{x}}$	s
Total Population	HH	122	4514.36	1467.83
	LL	195	4421.05	1247.46
	LH	6	3538.17	2380.39
	HL	2002	4574.00	NA
% Asian	NOTSIG HH	2002	4329.20 28.94	1548.08
% Asian	пп LL	122	28.94	20.04 3.59
	LH	6	18.36	12.98
	HL	1	1.09	NA
	NOTSIG	2002	14.69	15.38
% Black	HH	122	3.29	3.54
	LL	195	11.69	14.43
	LH	6	11.35	11.59
	HL	1	0.00	NA
	NOTSIG	2002	7.99	12.58
% Latino	HH	122	13.76	7.51
	LL	195	83.85	15.87
	LH	6	31.08	18.50
	HL	1	96.46	NA
	NOTSIG	2002	46.47	27.26
% White	HH	122	57.85	20.80
	LL	195	47.47	18.01
	LH HL	6 1	50.98	19.09
	nl Notsig	2002	73.90	NA
% Born Outside US	HH	122	52.13 30.32	20.63
% Born Outside 03	LL	122	30.32 39.68	8.46
	LH	6	23.88	17.75
	HL	1	45.45	NA
	NOTSIG	2002	34.21	13.88
% Below Poverty Line	HH	122	1.22	1.56
	LL	195	11.52	5.17
	LH	6	2.30	2.21
	HL	1	14.28	NA
	NOTSIG	2002	4.64	4.54
Median Income (\$)	HH	122	49500.43	13272.43
	LL	195	18801.87	3466.54
	LH	6	17446.67	13041.30
	HL	1	20649.00	NA
	NOTSIG	1996	30525.36	14013.67
% Unemployed	HH	122	2.86	1.51
	LL	195	4.66	1.76
	LH	6	4.26	2.90
	HL NOTSIG	1 2002	4.92 4.05	NA 1.82
Gini Index	HH	122	0.45	0.06
Gilli lildex	LL	122	0.43	0.00
	LH	5	0.41	0.03
	HL	1	0.45	NA
	NOTSIG	1991	0.43	0.06
% Commute Using Public Transit	HH	122	1.58	2.11
	LL	195	4.20	2.58
	LH	6	2.45	2.77
	HL	1	4.02	NA
	NOTSIG	2002	3.09	3.81
% Commute \geq 1 Hour	HH	122	6.21	2.63
	LL	195	5.23	2.21
	LH	6	3.74	3.54
	HL	1	4.39	NA
	NOTSIG	2002	5.99	2.76
Median Age	HH	122	42.41	5.99
	LL	195	29.75	3.35
	LH	6	34.97	13.51 NA
	HL	1	30.50	NA

	NOTSIG	2000	37.20	6.31
% K-12 Students	HH	122	14.02	5.31
70 K 12 Students	LL	195	22.31	3.89
	LH	6	7.70	6.46
	HL	1	22.10	NA
	NOTSIG	2002	15.78	5.42
% College Students	HH	122	5.47	3.44
	LL	195	6.47	1.78
	LH	6	32.92	40.41
	HL	1	6.78	NA
	NOTSIG	2002	7.28	6.85
% Bachelors Degree	HH	122	48.01	10.59
% bachelois Degree	LL	195	4.28	3.06
	LH	6	15.69	11.81
	HL	1	8.64	NA
	NOTSIG	2002	23.26	16.97
% Social Sciences Degree	HH	122	7.47	3.27
70 Social Sciences Degree	LL	195	0.77	0.77
	LH	6	2.33	2.22
	HL	1	1.84	NA
	NOTSIG	2002	3.74	3.50
% Engineering/CS Degree	HH	122	8.17	2.60
/ mgnicering/Co Degree	LL	122	0.17	2.00 0.47
	LH	195 6	1.58	0.47
	HL	1	2.78	0.77 NA
	NOTSIG	2002	2.78	
% Sciences Degree	HH	122	8.15	2.19
% Sciences Degree	пп LL			2.69
	LL LH	195	0.61	0.71
		6	2.47	2.12
	HL	1	0.28	NA 2.00
~ II	NOTSIG	2002	3.70	3.00
% Humanities Degree	HH	122	5.19	2.35
	LL	195	0.45	0.52
	LH	6	2.40	1.64
	HL	1	0.31	NA
	NOTSIG	2002	2.80	2.74
% Arts/Communications Degree	HH	122	5.77	3.50
	LL	195	0.34	0.50
	LH	6	1.83	2.32
	HL	1	0.48	NA
	NOTSIG	2002	3.80	4.56
% Education Degree	HH	122	2.31	0.94
	LL	195	0.43	0.41
	LH	6	0.94	0.81
	HL	1	1.01	NA
	NOTSIG	2002	1.39	1.12
% Business Degree	HH	122	9.35	2.98
	LL	195	0.77	0.82
	LH	6	3.51	2.84
	HL	1	0.92	NA
	NOTSIG	2002	4.18	3.14
Total Housing Units	HH	122	142.48	25.67
	LL	194	98.05	20.10
	LH	5	93.40	53.54
	HL	1	98.00	NA
	NOTSIG	1989	120.26	29.36
Median Year Structures Built	HH	119	1967.18	9.98
	LL	195	1952.73	9.36
	1.1.1	5	1952.00	8.12
	LH		1050.00	NA
	HL	1	1959.00	
	HL NOTSIG	1 1960	1962.07	13.25
% Renters	HL NOTSIG HH	1 1960 122	1962.07 41.46	13.25 25.43
% Renters	HL NOTSIG HH LL	1 1960	1962.07	13.25
% Renters	HL NOTSIG HH	1 1960 122	1962.07 41.46	13.25 25.43 17.39 30.57
% Renters	HL NOTSIG HH LL	1 1960 122 195	1962.07 41.46 63.70	13.25 25.43 17.39
% Renters	HL NOTSIG HH LL LH	1 1960 122 195 6	1962.07 41.46 63.70 30.87	13.25 25.43 17.39 30.57

		105		
	LL	195	1103.38	198.81
	LH	5	1583.20	549.35
	HL	1	1123.00	NA
~ I. M' - 1' D - ' M	NOTSIG	1975	1477.78	477.58
% In-Migration Previous Year	HH	122	3.63	2.87
	LL	195	0.66	0.75
	LH	6	5.69	3.27
	HL	1	0.20	NA
T (1)	NOTSIG	2002	1.78	2.37
Total Bars	HH	122	1.28	1.73
	LL	195	0.28	0.61
	LH	6	0.50 0.00	0.55
	HL NOTSIG	1		NA
Total Restaurants	HH	2002	0.78	1.50
Total Restaurants		122	13.34	12.12
	LL LH	195	3.86 15.33	4.13
	HL	6		16.71
	NOTSIG	1 2002	10.00 8.00	NA 10.01
Total Coffee Shops	HH	122		
Total Collee Shops	LL	122	1.80 0.33	2.43 0.86
	LH	195 6	0.55	0.86 2.14
	HL	6 1	1.85	2.14 NA
	NOTSIG	2002	0.90	1.66
Total Grocery Stores	HH	122	2.37	2.07
Total Glocery Stores	LL	122	3.11	2.07
	LH	6	3.00	3.10
	HL	1	5.00	NA
	NOTSIG	2001	2.33	2.38
Total Clothing Stores	HH	122	13.35	54.08
Total Clothing Stores	LL	195	4.46	13.08
	LH	6	9.00	13.67
	HL	1	4.00	NA
	NOTSIG	2001	6.14	26.11
Total Specialty Food Stores	HH	122	1.29	1.61
1 7	LL	195	1.10	2.12
	LH	6	2.00	2.61
	HL	1	2.00	NA
	NOTSIG	2001	1.04	2.44
Total Museums	HH	122	0.58	1.01
	LL	195	0.13	0.54
	LH	6	0.83	0.75
	HL	1	0.00	NA
	NOTSIG	2001	0.41	1.06
Total Artistic Groups	HH	122	3.18	3.91
	LL	195	0.31	0.58
	LH	6	1.33	1.03
	HL	1	0.00	NA
	NOTSIG	2001	2.36	5.25
Total Sports Stadiums	HH	122	0.40	0.92
	LL	195	0.08	0.32
	LH	6	0.67	0.82
	HL	1	0.00	NA
T + 1 T 1 - 1	NOTSIG	2001	0.19	0.50
Total Libraries	HH	122	0.51	1.01
	LL	195	0.13	0.37
	LH	6	0.83	0.75
	HL	1	0.00	NA 0.(2
	NOTSIG	2001	0.25	0.63
Total Golf Courses/Country Clubs	HH	122	0.14	0.43
		195	0.01	0.07
	LH HI	6	0.17	0.41 NA
	HL	1 2001	0.00	NA 0.28
	NOTSIG	2001	0.06	0.28

 Table B.4: Characteristics of Eng./CS Degree Clusters

Humanities

Variable	Levels	n	x	s
Fotal Population	HH	138	3882.16	1340.06
		174	4442.26	1404.94
	LH NOTSIG	3 2011	1691.67 4371.93	2086.56 1536.54
% Asian	HH	138	43/1.93	7.63
// 2 LJIUII	LL	156	3.25	7.03
	LH	3	30.74	26.71
	NOTSIG	2011	15.52	16.34
% Black	HH	138	3.98	3.98
	LL	174	10.82	12.22
	LH	3	13.41	18.67
	NOTSIG	2011	8.09	12.86
% Latino	HH	138	11.56	7.94
	LL	174	82.96	14.51
	LH NOTSIG	3 2011	25.98 47.36	12.15 27.35
% White	HH	2011 138	47.36	27.55
o willie	LL	158 174	76.16 44.97	11.14
	LH	3	41.22	18.67
	NOTSIG	2011	51.02	20.22
% Born Outside US	HH	138	24.87	8.58
	LL	174	40.59	8.42
	LH	3	22.23	15.55
	NOTSIG	2011	34.58	13.87
Median Age	HH	138	40.77	6.14
	LL	174	30.01	3.93
	LH NOTSIG	3 2009	31.80 37.17	20.01 6.38
6 Below Poverty Line	HH	138	0.89	0.38
· Delow I Overty Lille	LL	158 174	11.51	5.22
	LH	3	0.70	1.22
	NOTSIG	2011	4.77	4.60
Median Income (\$)	HH	138	55349.34	16370.03
• *	LL	174	18612.52	3388.36
	LH	2	8457.50	5728.27
	NOTSIG	2006	29843.30	12979.17
% Unemployed	HH	138	3.92	2.04
	LL	174	4.63	1.69
	LH	3 2011	10.12 3.99	8.56
Gini Index	NOTSIG HH	2011 138	0.50	1.78
Jun mucz	LL	158 174	0.50	0.05
	LH	2	0.42	0.03
	NOTSIG	2000	0.43	0.06
% In-Migration Previous Year	HH	138	4.40	3.42
-	LL	174	0.73	0.86
	LH	3	13.38	5.99
	NOTSIG	2011	1.69	2.21
% K-12 Students	HH	138	9.94	5.58
	LL	174	22.37	4.23
	LH	3 2011	1.26	1.53
% College Students	NOTSIG	2011	16.13	5.18
% Conege students	HH LL	138 174	5.00 6.29	6.00 1.78
	LL LH	1/4	64.47	1.78 54.97
		2011	7.33	6.55
	NULSIG		1.55	
8 Bachelors Degree	NOTSIG HH	138	57.24	8.84
% Bachelors Degree	HH LL	138 174	57.24 4.63	
% Bachelors Degree	HH			3.33
% Bachelors Degree	HH LL	174	4.63	3.33
% Bachelors Degree % Social Sciences Degree	HH LL LH	174 3	4.63 4.92	8.84 3.33 5.36 15.81 3.45
	HH LL LH NOTSIG	174 3 2011	4.63 4.92 22.20	3.33 5.36 15.81

	NOTSIG	2011	3.43	3.04
% Engineering/CS Degree	HH	138	4.57	2.08
7 Lingineering/ es Degree	LL	174	0.46	0.58
	LH	3	0.41	0.72
	NOTSIG	2011	2.77	2.55
% Sciences Degree	HH	138	7.77	2.85
	LL	174	0.70	0.92
	LH	3	1.04	0.97
	NOTSIG	2011	3.65	3.01
% Humanities Degree	HH	138	8.72	2.69
0	LL	174	0.43	0.45
	LH	3	0.83	0.72
	NOTSIG	2011	2.52	2.29
% Arts/Communications Degree	HH	138	13.20	4.91
C C	LL	174	0.37	0.48
	LH	3	0.31	0.27
	NOTSIG	2011	3.23	3.72
% Education Degree	HH	138	1.96	1.11
C C	LL	174	0.50	0.48
	LH	3	0.48	0.75
	NOTSIG	2011	1.39	1.12
% Business Degree	HH	138	8.50	3.04
0	LL	174	0.90	0.93
	LH	3	1.40	2.11
	NOTSIG	2011	4.15	3.21
Total Housing Units	HH	137	140.42	23.42
C	LL	173	98.29	21.11
	LH	1	24.00	NA
	NOTSIG	2000	119.95	29.53
Median Year Structures Built	HH	138	1961.01	12.30
	LL	174	1954.60	10.87
	LH	2	1945.50	9.19
	NOTSIG	1966	1962.18	13.19
% Renters	HH	138	53.99	26.61
	LL	174	63.82	17.19
	LH	3	3.59	3.24
	NOTSIG	2011	49.58	25.89
Gross Rent (\$)	HH	137	1974.61	478.80
	LL	174	1094.90	177 50
		- / -	10/4.70	177.53
	LH	2	1325.50	160.51
	LH NOTSIG	2 1985	1325.50 1478.61	160.51 489.70
% Commute Using Public Transit	LH NOTSIG HH	2	1325.50	160.51
% Commute Using Public Transit	LH NOTSIG HH LL	2 1985 138 174	1325.50 1478.61 2.10 4.37	160.51 489.70 2.05 2.88
% Commute Using Public Transit	LH NOTSIG HH LL LH	2 1985 138 174 3	1325.50 1478.61 2.10 4.37 1.80	160.51 489.70 2.05 2.88 2.31
	LH NOTSIG HH LL LH NOTSIG	2 1985 138 174 3 2011	1325.50 1478.61 2.10 4.37 1.80 3.06	160.51 489.70 2.05 2.88 2.31 3.80
% Commute Using Public Transit % Commute ≥ 1 Hour	LH NOTSIG HH LL LH NOTSIG HH	2 1985 138 174 3 2011 138	1325.50 1478.61 2.10 4.37 1.80 3.06 3.91	160.51 489.70 2.05 2.88 2.31 3.80 2.18
	LH NOTSIG HH LL LH NOTSIG HH LL	2 1985 138 174 3 2011 138 174	1325.50 1478.61 2.10 4.37 1.80 3.06 3.91 5.24	160.51 489.70 2.05 2.88 2.31 3.80 2.18 2.19
	LH NOTSIG HH LL LH NOTSIG HH LL LH	2 1985 138 174 3 2011 138 174 3	1325.50 1478.61 2.10 4.37 1.80 3.06 3.91 5.24 1.90	160.51 489.70 2.05 2.88 2.31 3.80 2.18 2.19 2.40
% Commute ≥ 1 Hour	LH NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG	2 1985 138 174 3 2011 138 174 3 2011	$\begin{array}{c} 1325.50\\ 1478.61\\ \hline \\ 2.10\\ 4.37\\ 1.80\\ 3.06\\ \hline \\ 3.91\\ 5.24\\ 1.90\\ 6.14\\ \end{array}$	160.51 489.70 2.05 2.88 2.31 3.80 2.18 2.19 2.40 2.73
	LH NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG HH	2 1985 138 174 3 2011 138 174 3 2011 138	$\begin{array}{c} 1325.50\\ 1478.61\\ \hline 2.10\\ 4.37\\ 1.80\\ 3.06\\ \hline 3.91\\ 5.24\\ 1.90\\ 6.14\\ \hline 1.72\\ \end{array}$	160.51 489.70 2.05 2.88 2.31 3.80 2.18 2.19 2.40 2.73 2.08
% Commute ≥ 1 Hour	LH NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG HH LL	2 1985 138 174 3 2011 138 174 3 2011 138 174	$\begin{array}{c} 1325.50\\ 1478.61\\ \hline 2.10\\ 4.37\\ 1.80\\ 3.06\\ \hline 3.91\\ 5.24\\ 1.90\\ 6.14\\ \hline 1.72\\ 0.25\\ \end{array}$	160.51 489.70 2.05 2.88 2.31 3.80 2.18 2.19 2.40 2.73 2.08 0.58
% Commute ≥ 1 Hour	LH NOTSIG HH LL LH NOTSIG HH LL LH HH LL LL LH	2 1985 138 174 3 2011 138 174 3 2011 138 174 3	$\begin{array}{r} 1325.50\\ 1478.61\\ \hline 2.10\\ 4.37\\ 1.80\\ 3.06\\ \hline 3.91\\ 5.24\\ 1.90\\ 6.14\\ \hline 1.72\\ 0.25\\ 0.67\\ \end{array}$	160.51 489.70 2.05 2.88 2.31 3.80 2.18 2.19 2.40 2.73 2.08 0.58 0.58
% Commute ≥ 1 Hour Total Bars	LH NOTSIG HH LL HH NOTSIG HH LL LH HH LL LH LH NOTSIG	2 1985 138 174 3 2011 138 174 3 2011 138 174 3 2011	$\begin{array}{r} 1325.50\\ 1478.61\\ \hline 2.10\\ 4.37\\ 1.80\\ 3.06\\ \hline 3.91\\ 5.24\\ 1.90\\ 6.14\\ \hline 1.72\\ 0.25\\ 0.67\\ 0.74\\ \end{array}$	160.51 489.70 2.05 2.88 2.31 3.80 2.18 2.19 2.40 2.73 2.08 0.58 0.58 1.44
% Commute ≥ 1 Hour	LH NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG HH	2 1985 138 174 3 2011 138 174 3 2011 138 174 3 2011 138	$\begin{array}{c} 1325.50\\ 1478.61\\ \hline 2.10\\ 4.37\\ 1.80\\ 3.06\\ \hline 3.91\\ 5.24\\ 1.90\\ 6.14\\ \hline 1.72\\ 0.25\\ 0.67\\ 0.74\\ \hline 14.72\\ \end{array}$	160.51 489.70 2.05 2.88 2.31 3.80 2.18 2.19 2.40 2.73 2.08 0.58 0.58 1.44 13.71
% Commute ≥ 1 Hour Total Bars	LH NOTSIG HH LL LH NOTSIG HH LL LH LH LH LH LH LH LH LH LH LH LH	2 1985 138 174 3 2011 138 174 3 2011 138 174 3 2011 138 174	$\begin{array}{c} 1325.50\\ 1478.61\\ \hline 2.10\\ 4.37\\ 1.80\\ 3.06\\ \hline 3.91\\ 5.24\\ 1.90\\ 6.14\\ 1.72\\ 0.25\\ 0.67\\ 0.74\\ \hline 14.72\\ 4.11\\ \end{array}$	160.51 489.70 2.05 2.88 2.31 3.80 2.18 2.19 2.40 2.73 2.08 0.58 0.58 1.44 13.71 4.75
% Commute ≥ 1 Hour Total Bars	LH NOTSIG HH LL LH NOTSIG HH NOTSIG HH LL LH NOTSIG HH LL LH LH	2 1985 138 174 3 2011 138 174 3 2011 138 174 3 2011 138 174 3 3	$\begin{array}{r} 1325.50\\ 1478.61\\ \hline 2.10\\ 4.37\\ 1.80\\ 3.06\\ \hline 3.91\\ 5.24\\ 1.90\\ 6.14\\ 1.72\\ 0.25\\ 0.67\\ 0.74\\ \hline 14.72\\ 4.11\\ 4.33\\ \end{array}$	160.51 489.70 2.05 2.88 2.31 3.80 2.18 2.19 2.40 2.73 2.08 0.58 0.58 1.44 13.71 4.75 0.58
% Commute ≥ 1 Hour Total Bars Total Restaurants	LH NOTSIG LL LH NOTSIG HH LL LH NOTSIG LL LH NOTSIG HH LL LL LH NOTSIG	2 1985 138 174 3 2011 138 174 3 2011 138 174 3 2011 138 174 3 2011	$\begin{array}{r} 1325.50\\ 1478.61\\ \hline 2.10\\ 4.37\\ 1.80\\ 3.06\\ \hline 3.91\\ 5.24\\ 1.90\\ 6.14\\ 1.72\\ 0.25\\ 0.67\\ 0.74\\ \hline 14.72\\ 4.11\\ 4.33\\ 7.83\\ \hline \end{array}$	160.51 489.70 2.05 2.88 2.31 3.80 2.18 2.19 2.40 2.73 2.08 0.58 0.58 1.44 13.71 4.75 0.58 9.76
% Commute ≥ 1 Hour Total Bars	LH NOTSIG LL LH NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG HH	2 1985 138 174 3 2011 138 174 3 2011 138 174 3 2011 138 174 3 2011 138	$\begin{array}{r} 1325.50\\ 1478.61\\ \hline 2.10\\ 4.37\\ 1.80\\ 3.06\\ \hline 3.91\\ 5.24\\ 1.90\\ 6.14\\ 1.72\\ 0.25\\ 0.67\\ 0.74\\ \hline 14.72\\ 4.11\\ 4.33\\ 7.83\\ \hline 2.15\\ \end{array}$	160.51 489.70 2.05 2.88 2.31 3.80 2.18 2.19 2.40 2.73 2.08 0.58 0.58 0.58 1.44 13.71 4.75 0.58 9.76 2.62
% Commute ≥ 1 Hour Total Bars Total Restaurants	LH NOTSIG HH LL H NOTSIG HH LL H NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG HH LL LH	2 1985 138 174 3 2011 138 174 3 2011 138 174 3 2011 138 174 3 2011 138 174	$\begin{array}{r} 1325.50\\ 1478.61\\ \hline 2.10\\ 4.37\\ 1.80\\ 3.06\\ \hline 3.91\\ 5.24\\ 1.90\\ 6.14\\ \hline 1.72\\ 0.25\\ 0.67\\ 0.74\\ \hline 14.72\\ 4.11\\ 4.33\\ 7.83\\ \hline 2.15\\ 0.41\\ \end{array}$	160.51 489.70 2.05 2.88 2.31 3.80 2.18 2.19 2.40 2.73 2.08 0.58 0.58 0.58 1.44 13.71 4.75 0.58 9.76 2.62 0.91
% Commute ≥ 1 Hour Total Bars Total Restaurants	LH NOTSIG HH LL H NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG HH LL LH	2 1985 138 174 3 2011 138 174 3 2011 138 174 3 2011 138 174 3 2011 138 174 3 2011	$\begin{array}{r} 1325.50\\ 1478.61\\ \hline 2.10\\ 4.37\\ 1.80\\ 3.06\\ \hline 3.91\\ 5.24\\ 1.90\\ 6.14\\ \hline 1.72\\ 0.25\\ 0.67\\ 0.74\\ \hline 1.72\\ 4.11\\ 4.33\\ 7.83\\ \hline 2.15\\ 0.41\\ 0.33\\ \end{array}$	160.51 489.70 2.05 2.88 2.31 3.80 2.18 2.19 2.40 2.73 2.08 0.58 0.58 0.58 1.44 13.71 4.75 0.58 9.76 2.62 0.91 0.58
% Commute ≥ 1 Hour Total Bars Total Restaurants Total Coffee Shops	LH NOTSIG HH LL H NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG	2 1985 138 174 3 2011 138 174 3 2011 138 174 3 2011 138 174 3 2011 138 174 3 2011	$\begin{array}{r} 1325.50\\ 1478.61\\ \hline 2.10\\ 4.37\\ 1.80\\ 3.06\\ \hline 3.91\\ 5.24\\ 1.90\\ 6.14\\ \hline 1.72\\ 0.25\\ 0.67\\ 0.74\\ \hline 14.72\\ 4.11\\ 4.33\\ 7.83\\ \hline 2.15\\ 0.41\\ 0.33\\ 0.86\\ \hline \end{array}$	$\begin{array}{r} 160.51\\ 489.70\\ \hline 2.05\\ 2.88\\ 2.31\\ 3.80\\ \hline 2.18\\ 2.19\\ 2.40\\ \hline 2.73\\ \hline 2.08\\ 0.58\\ 0.58\\ 0.58\\ 1.44\\ \hline 13.71\\ 4.75\\ 0.58\\ 9.76\\ \hline 2.62\\ 0.91\\ 0.58\\ 1.61\\ \hline \end{array}$
% Commute ≥ 1 Hour Total Bars Total Restaurants	LH NOTSIG HH LL H HH LL LH NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG HH	2 1985 138 174 3 2011 138 174 3 2011 138 174 3 2011 138 174 3 2011 138 174 3 2011 138	$\begin{array}{r} 1325.50\\ 1478.61\\ \hline 2.10\\ 4.37\\ 1.80\\ 3.06\\ \hline 3.91\\ 5.24\\ 1.90\\ 6.14\\ \hline 1.72\\ 0.25\\ 0.67\\ 0.74\\ \hline 14.72\\ 4.11\\ 4.33\\ 7.83\\ \hline 2.15\\ 0.41\\ 0.33\\ 0.86\\ \hline 2.30\\ \end{array}$	160.51 489.70 2.05 2.88 2.31 3.80 2.18 2.19 2.40 2.73 2.08 0.58 0.58 0.58 1.44 13.71 4.75 0.58 9.76 2.62 0.91 0.58 1.61 2.12
% Commute ≥ 1 Hour Total Bars Total Restaurants Total Coffee Shops	LH NOTSIG HH LL H HH LL LH NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG HH LL LH	2 1985 138 174 3 2011 138 174 3 2011 138 174 3 2011 138 174 3 2011 138 174 3 2011 138 174 3 2011 138 174 174 174 175 175 175 175 175 175 175 175	$\begin{array}{r} 1325.50\\ 1478.61\\ \hline 2.10\\ 4.37\\ 1.80\\ 3.06\\ \hline 3.91\\ 5.24\\ 1.90\\ 6.14\\ \hline 1.72\\ 0.25\\ 0.67\\ 0.74\\ \hline 14.72\\ 4.11\\ 4.33\\ 7.83\\ \hline 2.15\\ 0.41\\ 0.33\\ 0.86\\ \hline 2.30\\ 2.98\\ \end{array}$	160.51 489.70 2.05 2.88 2.31 3.80 2.18 2.19 2.40 2.73 2.08 0.58 0.58 1.44 13.71 4.75 0.58 9.76 2.62 0.91 0.58 1.61 2.12 2.55
% Commute ≥ 1 Hour Total Bars Total Restaurants Total Coffee Shops	LH NOTSIG HH LL H HH LL LH NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG	2 1985 138 174 3 2011	$\begin{array}{r} 1325.50\\ 1478.61\\ \hline 2.10\\ 4.37\\ 1.80\\ 3.06\\ \hline 3.91\\ 5.24\\ 1.90\\ 6.14\\ \hline 1.72\\ 0.25\\ 0.67\\ 0.74\\ \hline 14.72\\ 4.11\\ 4.33\\ 7.83\\ 2.15\\ 0.41\\ 0.33\\ 0.86\\ \hline 2.30\\ 2.98\\ 0.00\\ \hline \end{array}$	160.51 489.70 2.05 2.88 2.31 3.80 2.18 2.19 2.40 2.73 2.08 0.58 0.58 1.44 13.71 4.75 0.58 9.76 2.62 0.91 0.58 1.61 2.12 2.55 0.00
% Commute ≥ 1 Hour Total Bars Total Restaurants Total Coffee Shops Total Grocery Stores	LH NOTSIG HH LL LH UH LH UH NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG	2 1985 138 174 3 2011	$\begin{array}{c} 1325.50\\ 1478.61\\ \hline 2.10\\ 4.37\\ 1.80\\ 3.06\\ \hline 3.91\\ 5.24\\ 1.90\\ 6.14\\ 1.72\\ 0.25\\ 0.67\\ 0.74\\ \hline 14.72\\ 4.11\\ 4.33\\ 7.83\\ \hline 2.15\\ 0.41\\ 0.33\\ 0.86\\ \hline 2.30\\ 2.98\\ 0.00\\ 2.36\\ \end{array}$	160.51 489.70 2.05 2.88 2.31 3.80 2.18 2.19 2.40 2.40 2.73 2.08 0.58 0.58 1.44 13.71 4.75 0.58 9.76 2.62 0.91 0.58 1.61 2.12 2.55 0.00 2.39
% Commute ≥ 1 Hour Total Bars Total Restaurants Total Coffee Shops	LH NOTSIG HH LL H HH LL LH NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG HH LL LH NOTSIG HH LL LH	2 1985 138 174 3 2011	$\begin{array}{c} 1325.50\\ 1478.61\\ \hline 2.10\\ 4.37\\ 1.80\\ 3.06\\ \hline 3.91\\ 5.24\\ 1.90\\ 6.14\\ \hline 1.72\\ 0.25\\ 0.67\\ 0.74\\ \hline 14.72\\ 4.11\\ 4.33\\ 7.83\\ 2.15\\ 0.41\\ 0.33\\ 0.86\\ \hline 2.30\\ 2.98\\ 0.00\\ \hline \end{array}$	$\begin{array}{r} 160.51\\ 489.70\\ \hline 2.05\\ 2.88\\ 2.31\\ 3.80\\ \hline 2.18\\ 2.19\\ 2.40\\ 2.73\\ \hline 2.08\\ 0.58\\ 0.58\\ 0.58\\ 1.44\\ 13.71\\ 4.75\\ 0.58\\ 9.76\\ \hline 2.62\\ 0.91\\ 0.58\\ 1.61\\ \hline 2.12\\ 2.55\\ 0.00\\ \end{array}$

	LH	3	0.00	0.00
	NOTSIG	2010	5.97	28.57
Total Specialty Food Stores	HH	138	1.62	2.23
	LL	174	1.20	2.34
	LH	3	0.00	0.00
	NOTSIG	2010	1.01	2.39
Total Museums	HH	138	1.51	2.04
	LL	174	0.16	0.58
	LH	3	1.67	1.53
	NOTSIG	2010	0.34	0.90
Total Artistic Groups	HH	138	9.96	12.95
	LL	174	0.34	0.58
	LH	3	1.00	1.00
	NOTSIG	2010	1.86	3.58
Total Sports Stadiums	HH	138	0.39	0.79
	LL	174	0.07	0.33
	LH	3	0.67	0.58
	NOTSIG	2010	0.19	0.51
Total Libraries	HH	138	0.49	0.87
	LL	174	0.18	0.47
	LH	3	1.00	1.73
	NOTSIG	2010	0.25	0.63
Total Golf Courses/Country Clubs	HH	138	0.07	0.28
	LL	174	0.01	0.08
	LH	3	0.33	0.58
	NOTSIG	2010	0.06	0.29

 Table B.5: Characteristics of Hum. Degree Clusters

Education

Variable	Levels	n	$\bar{\mathbf{x}}$	s
Total Population	HH	41	4226.95	1944.36
	LL	129	4406.36	1409.41
	LH	8	2651.50	1939.75
	HL	3	4351.67	922.86
	NOTSIG	2145	4349.52	1517.61
		20	0.00	0.00
	all	2346	4307.64	1568.59
% Asian	HH	41	13.85	12.19
	LL	129	7.19	14.25
	LH	8	13.18	9.89
	HL	3	8.38	8.35
	NOTSIG	2145	14.79	15.92
% Black	HH	41	3.26	3.30
	LL	129	8.43	8.55
	LH	8	5.26	3.81
	HL	3	16.96	13.11
	NOTSIG	2145	8.13	12.83
% Latino	HH	41	18.62	10.99
	LL	129	79.23	19.62
	LH	8	20.96	8.31
	HL	3	64.49	10.17
	NOTSIG	2145	46.62	28.33
% White	HH	41	73.52	12.51
	LL	129	44.92	13.96
	LH	8	65.88	14.46
	HL	3	40.99	12.88
	NOTSIG	2145	52.03	20.68
% Born Outside US	HH	41	18.36	9.95
	LL	129	42.89	9.86
	LH	8	14.55	7.57
	HL	3	47.70	17.98
	NOTSIG	2145	34.30	13.46
Median Age	HH	41	45.05	5.54

	* *	100		
	LL	129	29.85	3.92
	LH HL	8	40.27	15.08 2.69
	nl Notsig	3	34.27	
% Below Poverty Line	HH	2143 41	37.09	6.37 1.80
% below Foverty Line	LL	129	1.18	1.80 5.24
	LH	8	0.16	0.31
	HL	3	5.54	1.19
	NOTSIG	2145	4.75	4.70
Median Income (\$)	HH	41	50253.46	14399.06
	LL	129	18247.89	3956.44
	LH	8	27543.12	17419.93
	HL	3	20701.67	5176.57
	NOTSIG	2139	30884.78	14339.50
% Unemployed	HH	41	2.81	1.39
	LL	129	4.33	1.63
	LH	8	4.33	3.15
	HL	3	3.51	1.73
	NOTSIG	2145	4.04	1.83
Gini Index	HH	41	0.44	0.06
	LL	129	0.43	0.06
	LH	6	0.43	0.08
	HL	3	0.44	0.00
	NOTSIG	2135	0.43	0.06
% In-Migration Previous Year	HH LL	41	1.88	1.72
	LL LH	129 8	1.18 5.08	2.14 5.12
	HL	3	0.53	0.35
	NOTSIG	2145	1.82	2.38
% K-12 Students	HH	41	14.84	4.43
70 K 12 Students	LL	129	21.02	5.66
	LH	8	8.54	8.51
	HL	3	16.23	2.67
	NOTSIG	2145	15.98	5.51
% College Students	HH	41	5.85	2.65
_	LL	129	8.08	9.54
	LH	8	27.82	41.46
	HL	3	5.54	1.18
	NOTSIG	2145	7.08	6.14
% Bachelors Degree	HH	41	42.24	12.48
	LL	129	5.80	4.96
	LH	8	29.55	21.74
	HL	3	14.72	2.52
a Carial Cairana Damar	NOTSIG	2145	23.59	17.68
% Social Sciences Degree	HH LL	41	7.25	3.57
	LH	129	0.87	0.93
	HL	8	4.83 2.96	3.22 1.76
	NOTSIG	2145	3.78	3.56
% Engineering/CS Degree	HH	41	5.32	2.60
	LL	129	0.82	1.22
	LH	8	4.41	4.71
	HL	3	0.57	0.53
	NOTSIG	2145	2.76	2.53
% Sciences Degree	HH	41	7.16	2.67
	LL	129	0.95	1.03
	LH	8	6.62	7.73
	HL	3	1.91	0.53
	NOTSIG	2145	3.76	3.12
% Humanities Degree	HH	41	5.10	2.21
	LL	129	0.56	0.68
	LH	8	3.61	4.27
	HL	3	1.75	0.52
7 Arts/Communications Demos 44	NOTSIG	2145	2.81	2.76
% Arts/Communications Degree 41	5.01 LL	2.65 129	0.78	1.47
	LH	129	4.27	4.03
		0	1.47	1.05

	HL NOTSIG	3 2145	3.10 3.74	0.84 4.54
% Education Degree	HH	41	3.23	1.15
% Education Degree	LL	129	0.33	0.33
	LH	8	0.53	0.55
	HL	3	1.49	0.06
	NOTSIG	2145	1.38	1.10
% Business Degree	HH	41	7.51	2.93
// Busiliess Degree	LL	129	1.04	1.10
	LH	8	3.64	3.20
	HL	3	2.23	0.55
	NOTSIG	2145	4.29	3.36
Total Housing Units	HH	41	130.24	36.94
Total Housing Chits	LL	128	99.10	22.95
	LH	8	81.38	79.95
	HL	3	98.67	18.77
	NOTSIG	2131	120.70	29.07
Median Year Structures Built	HH	39	1963.85	11.59
	LL	129	1957.28	13.98
	LH	6	1963.33	17.21
	HL	3	1962.00	13.00
	NOTSIG	2103	1961.73	13.06
% Renters	HH	41	24.07	17.11
	LL	129	67.12	17.35
	LH	8	27.99	29.78
	HL	3	79.84	18.59
	NOTSIG	2145	50.43	25.63
Gross Rent (\$)	HH	41	2035.85	620.12
	LL	129	1114.61	206.03
	LH	5	1733.60	309.46
	HL	3	1177.33	266.28
	NOTSIG	2120	1490.22	495.26
% Commute Using Public Transit	HH	41	1.01	0.85
0	LL	129	5.14	4.22
	LH	8	1.41	1.67
	HL	3	9.85	7.26
	NOTSIG	2145	3.01	3.62
% Commute \geq 1 Hour	HH	41	6.67	1.88
	LL	129	5.45	2.52
	LH	8	3.99	3.94
	HL	3	4.57	2.37
	NOTSIG	2145	5.96	2.74
Total Bars	HH	41	1.17	1.61
	LL	129	0.32	0.76
	LH	8	0.75	1.39
	HL	3	0.67	1.15
	NOTSIG	2145	0.78	1.49
Total Restaurants	HH	41	8.41	7.98
	LL	129	6.56	14.95
	LH	8	9.75	18.84
	HL	3	3.67	3.06
	NOTSIG	2145	8.03	9.56
Total Coffee Shops	HH	41	1.41	1.82
	LL	129	0.60	1.89
	LH	8	1.38	3.11
	HL	3	1.00	1.00
Total Crosser Starra	NOTSIG	2145	0.91	1.66
Total Grocery Stores	HH	41	1.54	1.67
	LL	129	3.43	4.06
	LH	8	1.00	1.60
	HL	3	1.67	2.08
Total Clathing Starsa	NOTSIG	2144	2.36	2.25
Total Clothing Stores	HH	41	5.80	7.66 86.77
	LL	129	14.53	86.77
	LH	8	5.00	12.95
	н	2	2 00	2.00
	HL NOTSIG	3 2144	2.00 5.92	2.00 19.11

Total Specialty Food Stores	HH	41	1.05	1.32
	LL	129	1.95	7.54
	LH	8	0.88	1.73
	HL	3	0.33	0.58
	NOTSIG	2144	1.01	1.62
Total Museums	HH	41	0.46	0.81
	LL	129	0.22	0.83
	LH	8	0.62	0.74
	HL	3	0.00	0.00
	NOTSIG	2144	0.41	1.04
Total Artistic Groups	HH	41	2.32	2.66
	LL	129	0.44	0.95
	LH	8	1.88	2.64
	HL	3	1.67	1.53
	NOTSIG	2144	2.33	5.16
Total Sports Stadiums	HH	41	0.39	0.63
	LL	129	0.10	0.41
	LH	8	0.38	0.52
	HL	3	0.00	0.00
	NOTSIG	2144	0.20	0.53
Total Libraries	HH	41	0.41	0.74
	LL	129	0.21	0.51
	LH	8	0.62	1.06
	HL	3	0.00	0.00
	NOTSIG	2144	0.26	0.64
Total Golf Courses/Country Clubs	HH	41	0.29	0.51
	LL	129	0.02	0.12
	LH	8	0.12	0.35
	HL	3	0.00	0.00
	NOTSIG	2144	0.06	0.28

	110 1010		0.00	0.00
Table B.6: Characteristics	of Educa	tion Degr	ee Cluste	ers

Business

Variable	Levels	n	$\bar{\mathbf{x}}$	s
Total Population	HH	126	4345.79	1550.74
	LL	212	4449.60	1451.24
	LH	6	4208.33	2256.61
	NOTSIG	1982	4333.80	1527.54
% Asian	HH	126	21.35	20.57
	LL	212	2.06	4.44
	LH	6	13.32	4.77
	NOTSIG	1982	15.21	15.67
% Black	HH	126	3.07	3.40
	LL	212	10.94	12.64
	LH	6	8.79	6.31
	NOTSIG	1982	8.07	12.80
% Latinx	HH	126	12.02	6.95
	LL	212	83.31	15.54
	LH	6	22.26	19.88
	NOTSIG	1982	46.43	27.07
% White	HH	126	66.57	21.63
	LL	212	48.19	17.56
	LH	6	65.89	12.85
	NOTSIG	1982	51.49	20.37
% Born Outside US	HH	126	27.58	13.09
	LL	212	39.60	8.55
	LH	6	25.37	8.45
	NOTSIG	1982	34.35	13.85
Median Age	HH	126	42.93	5.59
	LL	212	29.29	3.52
	LH	6	37.02	9.28
	NOTSIG	1980	37.26	6.23

% Below Poverty Line	HH	126	0.83	1.01
		212	11.89	5.14
	LH NOTSIG	6 1982	0.97 4.58	1.58 4.43
Median Income (\$)	HH	1982	53985.42	4.45
Wedian meone (\$)	LL	212	18512.75	3571.73
	LH	6	45446.83	33125.54
	NOTSIG	1976	30242.83	13381.06
% Unemployed	HH	126	3.18	1.68
	LL	212	4.50	1.70
	LH	6	4.29	2.17
	NOTSIG	1982	4.04	1.83
Gini Index	HH	126	0.47	0.06
	LL	212	0.42	0.05
	LH	6	0.45	0.08
77 La Mignation Dussiana Vaar	NOTSIG HH	1970	0.43	0.06
% In-Migration Previous Year	LL	126 212	4.07 0.85	3.27 1.92
	LH	6	3.94	3.84
	NOTSIG	1982	1.74	2.26
% K-12 Students	HH	126	12.19	6.10
	LL	212	22.56	4.41
	LH	6	10.68	6.59
	NOTSIG	1982	15.81	5.22
% College Students	HH	126	5.03	3.40
	LL	212	7.03	7.19
	LH	6	16.65	26.41
	NOTSIG	1982	7.31	6.80
% Bachelors Degree	HH	126	53.31	10.02
	LL LH	212	4.26	2.93
	LH NOTSIG	6 1982	39.63 22.96	19.91 16.35
% Social Sciences Degree	HH	1982	9.33	3.69
% Social Sciences Degree		212	0.75	0.75
	LH	6	10.38	7.22
	NOTSIG	1982	3.62	3.27
% Engineering/CS Degree	HH	126	6.73	2.89
	LL	212	0.44	0.61
	LH	6	3.88	3.58
	NOTSIG	1982	2.68	2.33
% Sciences Degree	HH	126	8.44	2.87
	LL	212	0.60	0.66
	LH	6	5.63	3.07
% Humanities Degree	NOTSIG HH	1982 126	3.69	2.95
% Humanities Degree	LL	212	0.24	2.71
	LH	6	6.63	2.98
	NOTSIG	1982	2.74	2.64
% Visual Arts/Communications Degree	HH	126	8.83	5.35
8	LL	212	0.38	0.54
	LH	6	8.31	5.22
	NOTSIG	1982	3.60	4.29
% Education Degree	HH	126	2.22	1.07
	LL	212	0.44	0.46
	LH	6	1.24	1.04
	NOTSIG	1982	1.40	1.12
% Business Degree	HH	126	9.94	3.07
	LL LH	212 6	0.77 2.87	0.70
	lh NOTSIG	6 1982	2.87 4.16	0.99
Total Housing Units	HH	1982	4.16	3.07 26.00
Total Housing Ollits	LL	211	98.11	20.00 21.47
	LH	5	131.60	31.43
	NOTSIG	1969	120.32	29.34
Median Year Structures Built	HH	124	1966.98	11.86
	LL	212	1954.89	11.78

			1050 (5	
	LH	6	1959.67	13.57
07 Dontore	NOTSIG HH	1938	1961.90	13.10
% Renters	LL	126	42.26	27.15
	LL LH	212 6	64.23 43.08	17.33 35.92
	NOTSIG	1982	43.08	25.86
Gross Rent (\$)	HH	1982	2146.65	515.41
Gross Kent (\$)	LL	212	2140.05 1103.14	201.17
	LH	6	2059.83	730.27
	NOTSIG	1954	1474.93	474.23
% Commute Using Public Transit	HH	126	1.38	1.76
// Commute Comg Lubie Transit	LL	212	4.38	3.08
	LH	6	4.05	5.23
	NOTSIG	1982	3.07	3.78
% Commute \geq 1 Hour	HH	126	5.74	2.81
—	LL	212	5.40	2.37
	LH	6	4.23	3.94
	NOTSIG	1982	6.00	2.75
Total Bars	HH	126	1.67	2.45
	LL	212	0.29	0.61
	LH	6	1.83	4.02
	NOTSIG	1982	0.75	1.41
Total Restaurants	HH	126	14.59	16.07
	LL	212	4.42	4.60
	LH	6	15.50	23.76
	NOTSIG	1982	7.89	9.59
Total Coffee Shops	HH	126	1.93	2.46
	LL	212	0.43	1.03
	LH	6	2.67	3.44
	NOTSIG	1982	0.88	1.64
Total Grocery Stores	HH	126	2.31	2.24
	LL	212	3.17	2.56
	LH	6	3.17	4.12
	NOTSIG	1981	2.32	2.36
Total Clothing Stores	HH	126	11.57	23.77
	LL	212	5.62	14.18
	LH	6	100.67	239.25
Tetel Constalue Fred Channel	NOTSIG	1981	5.85	25.64
Total Specialty Food Stores	HH LL	126 212	1.37	2.08 2.25
	LL	6	1.19 2.33	3.88
	NOTSIG	1981	1.03	2.40
Total Museums	HH	126	0.93	1.69
Total Museullis		212	0.93	0.60
	LH	6	3.33	5.47
	NOTSIG	1981	0.38	0.94
Total Artistic Groups	НН	126	6.56	9.83
Total Thilotte Croups	LL	212	0.39	0.61
	LH	6	6.00	9.14
	NOTSIG	1981	2.13	4.62
Total Sports Stadiums	HH	126	0.42	0.61
L	LL	212	0.08	0.35
	LH	6	0.33	0.82
	NOTSIG	1981	0.19	0.53
Total Libraries	HH	126	0.47	0.85
	LL	212	0.18	0.53
	LH	6	0.33	0.82
	NOTSIG	1981	0.25	0.63
Total Golf Courses/Country Clubs	HH	126	0.13	0.43
	LL	212	0.01	0.12
	LH	6	0.00	0.00
	NOTSIG	1981	0.06	0.28
			-	

Table B.7:	Characteristics	of Business	Degree	Clusters

Draft Concepts Presented at June 19, 2014 Workshop

NORTH WESTLAKE DESIGN DISTRICT



NEIGHBORHOOD CHARACTER: NEIGHBORHOOD SERVING USES

The Westlake Design District encourages neighborhood serving amenities while promoting and preserving neighborhood character.

Ground floor commercial uses shall be limited to the following retail sales:

Art Galleries	Art Supplies	Athletic/Sporting Goods	Bakeries
Books or Cards	Bicycle Sales and Repair	Clock or Watch Sales and/or Repair	Clothing
Computer Sales and Repair	Drug Stores	Fabrics or Dry Goods	Florists
Food/Grocery Stores	Hardware	Household Goods	Newsstands
Photographic Equipment and Repair	Restaurants, Food Stands (without a drive thru)	Stationary	Toys

or neighborhood services:

Barber Shop or Beauty Parlor	Blueprinting	Childcare Facility	Club or Lodge
Copying Services	Custom Dressmaking	Dry Cleaning	Financial Services
Laundry or Self-Service Laundromat	Locksmith	Optician	Photographer
Shoe Repair	Tailor	Community Room	Learning Center

NEIGHBORHOOD CHARACTER: PROHIBITED USES

Businesses that serve the local community, have regular operating hours, and fit a pedestrian-oriented design help create an active pedestrian environment. Uses that are not conducive to promoting an active pedestrian environment are considered undesired uses.

Adult Entertainment	Auditorium	Automotive Dismantling Yards	Automotive Painting
Automotive Repair and Service	Automotive Sales, used	Automotive Storage Area	Automotive Storage Garage
Automotive Upholstering	Bail Bond Broker	Baseball Batting Range	Cable Television Broadcasting
Car Wash	Gasoline Stations	Helicopter Landings	Hospital (contagious, mental, drug and alcohol)
Miniature Golf	Night Club	Open Storage Area, and/or incidental to permitted use	Pawnshop
Public Storage Facility	Recycling Business	Rescue Mission	Restaurant, drive through
Shooting Gallery	Skateboard Track	Sports Arena or Stadium	Tow Truck Dispatching

Figure B.1: City Zoning Ordinance Draft Concepts, "North Westlake Design District" (City of Los Angeles, 2014).

Appendix C: Neighborhood-Level Model Diagnostics

Independent Variable Linearity

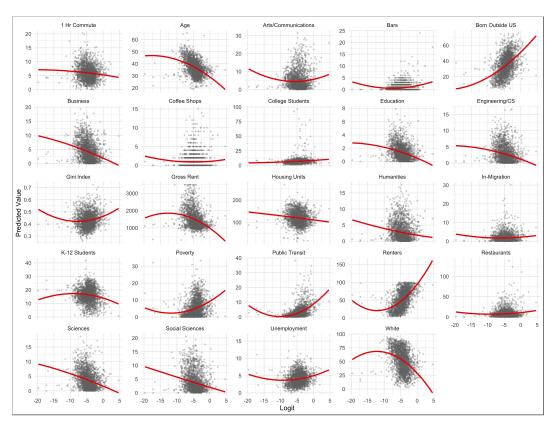


Figure C.1: "Model 3" Independent Variables

Variable Inflation Factors

Variable	VIF
Total Population	1.53
Social Sciences	4.73
Sciences	3.56
Engineering/CS	3.25
Arts/Comms	5.71
Humanities	4.52
Business	4.13
Education	1.58
Born Outside US	2.55
White	1.66
Age	3.10
Poverty	3.60
Unemployment	1.23
Gini Index	1.59

K-12 Students	5.36
College Students	2.26
Housing Units	1.96
Gross Rent	3.02
Transit	2.86
1 Hour Commute	1.40
Renters	2.82
Bars	2.45
Restaurants	3.91
Coffee	3.24

Table C.1: Model 3 VIFs



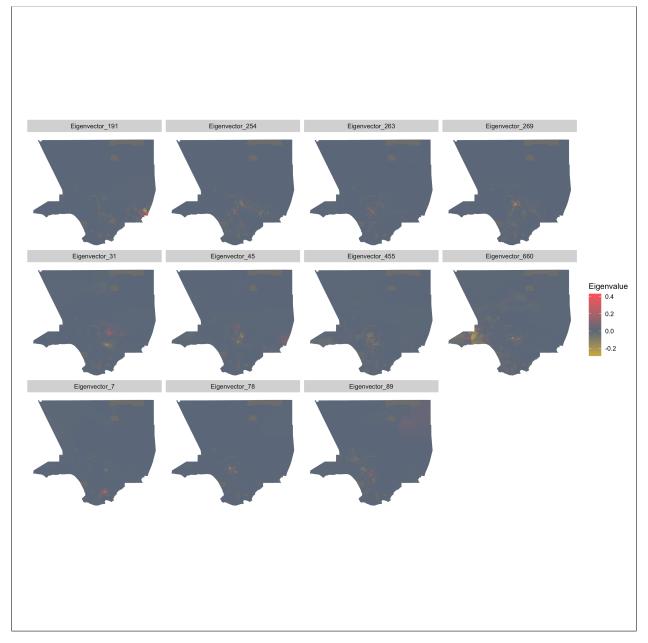


Figure C.2: Eigenvectors Selected for Spatial Filtering in "Model 3"

Appendix D: Student-Level Data and Model Diagnostics

Course Aggregation

Variable	Courses	
Art/Communications Courses	Visual/Studio Arts, Journalism, Communica-	
	tions, TV/Radio, Music, Dance, Theater, Pho-	
	tography	
Visual/Studio Arts Courses	Visual/Studio Arts	
Communications Courses	Journalism, Communications, TV/Radio	
Other Arts Courses	Music, Dance, Theater, Photography	
Science Courses	Chemistry, Biology, Physics, Environmental	
	Science, Geology, Astronomy, Nutrition	
Computer Sci/Engineering Courses	Engineering, Computer Science, Mathematics	
Education Courses	Education, Child Development, Kinesiology	
Humanities Courses	History, English/Literature, Foreign Lan-	
	guages, Linguistics, General Humanities,	
	Philosophy, Religion	
Social Science Courses	Anthropology, Sociology, Psychology, Political	
	Science, Human Geography, Economics	
Business Courses	Business, Accounting, Information Systems	

 Table D.1: Course Aggregations, FCC Courses 2015-2016

Variable Inflation Factors - Student-Level Model

Variable	VIF
Studio Art Courses	1.18
Comms. Courses	1.05
Other Art Courses	1.03
Science Courses	1.07
CS/Eng Courses	1.36
Education Courses	1.09
Humanities Courses	1.47
Business Courses	1.11
Soc. Sci. Courses	1.24
Race/Ethnicity	1.18
Need-Based Aid	1.10
Time Status	1.62
Age	1.23
Degree-Seeking	1.10
Art/Comm Major	1.16
Humanities Major	1.68
CS/Eng Major	1.02
Soc. Sci. Major	1.16
Business Major	1.10
Science Major	1.68
Education Major	1.07

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