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CALIFORNIA GEOGRAPHICAL SOCIETY

Edited by
MATTHEW DERRICK
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ROSEMARY SHERRIFF

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The California Geographer

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From the Editors: Revamping *The California Geographer*

WE ARE PLEASED TO PRESENT the 2018 edition of *The California Geographer*. In this volume, representing the second year of our co-editorship, we have moved forward in revamping the journal. An important, foundational step has been revitalizing the editorial board, infusing it with fresh blood—four of the seven board members are new this year—in the process of articulating a set of concrete duties and expectations. We thank Robert Voeks, Gregory Bohr, and James Keese for graciously agreeing to continue their valuable service on the board, ensuring continuity and institutional memory; and we welcome new members Robin Datel, Kathleen Farley, Ian Dunham, and Lilly House-Peters.

This issue of *The California Geographer* also reflects our dedication to expanding the scope of the journal, illustrated in the range of submissions featured in these pages. From Sacramento State, Robin Datel kicks off the volume with an expansive piece of scholarship examining eleven events that have shaped her home city's human landscape; this article, appearing as it does on the heels of the annual meeting of the California Geographical Society (CGS) in Sacramento, initiates what we hope will become an annual tradition of featuring a lead research article that highlights geographical aspects of that year's conference host city. Last year we missed the mark in San Diego, but we make it up in 2018 with a contribution from San Diego State's Kathleen Farley, who examines manager perceptions of goals and outcomes of public rangeland management in San Diego County.

This issue also features award-winning student research, its quality doubly tested, first by CGS conference judges and then by anonymous reviewers for the journal. Included this year are essays submitted by both the graduate and undergraduate first-place winners of the 2017 Tom McKnight Paper Award. Etem Bairam, who completed his master's degree at Long Beach State this past year, examines the origins and spatial diffusion of female professional soccer players in the United States over the past quarter century. And recent Humboldt State graduate Nathaniel Douglass, in an article co-authored with Nicholas Perdue, maps out and examines perceptions of neighborhoods in Arcata.

In the realm of economic geography, a team of authors led by Ian Dunham of San Francisco State investigates the controversial topic of availability of retail financial services in low- to moderate-income neighborhoods, comparing the cases of Los Angeles, Las Vegas, and Miami. In a piece of historical environmental landscape analysis, Peggy Hauselt of Stanislaus performs a nuanced qualitative examination of nineteenth-century texts to characterize Santa Rosa Island's native plant coverage in the latter decades of the 1800s. From Humboldt State, Eric Fowler and Matthew Derrick show how "reel" representations in the comedy TV series *Portlandia* serve to cover over a "real" urban geography of gentrification. And in the process of developing a case for the continuing utility of direct experience in geographic education, Nick Perdue earns a second byline in this issue with his critical reflection of a recent class field exploration of Oregon's Malheur National Wildlife Refuge.

The 2018 *California Geographer* moves forward in expanding on the traditional research article format. This issue features a pair of Field Notes contributions, which we envision as less formal, first-person updates on the field-based research activities of California geographers. First is a posting from Bridget Martin, a doctoral candidate at Berkeley, who compellingly reflects on her continuing research activities in South Korea. And second is an update from Derrick on some of his activities during his sabbatical year in Bishkek, Kyrgyzstan. Also included are book reviews from Heather Benson, Janelle Adsit, and Jessie Clark on topics related to California geography.

Moving forward, we envision an increasingly expanded format that, evolving year to year, will grow to include not only geographic scholarship, geographic education, and book reviews, but also non-scholarly essays, photo essays, and geo-visualizations. We also welcome geographic chronicles that may include reflective essays, general geographical interest stories, notes from the field, and notices relevant to California geographers.

We are accepting submissions for the next volume (2019) of *The California Geographer* until February 1, 2019. We also welcome questions on your interests for submissions. Please send your submissions (MS Word) and figures (JPEG or TIFF) via an email attachment to either of the co-editors: Matthew Derrick (mad632@humboldt.edu) and Rosemary Sherriff (sheriff@humboldt.edu).

*Matthew Derrick
Rosemary Sherriff*

Eleven More Events that Have Shaped Sacramento's Human Landscape

Robin Datel
California State University, Sacramento

Abstract

An earlier article in *The California Geographer* (Dilsaver, Wyckoff, and Preston 2000) identified fifteen historical events that triggered significant changes to California's human landscape. Building on that base, this article focuses on the four-county Sacramento region and adds eleven more events that have shaped its human landscape. The eleven events involve race-based slavery, the state capital, chain businesses, redevelopment, public higher education, the expanding medical sector, the U.S. immigration system, historic preservation, deindustrialization, restaurants, and human-driven drought. Each event has left its mark on places in the Sacramento area, as well as more widely across the state. Many of the events reveal important social and institutional, as well as economic and technological, aspects of Sacramento and California. These eleven events and the fifteen earlier identified reveal the multi-scalar and often conflicting values and forces that produce human landscapes and related spatial patterns.

Introduction

IN THE RETROSPECTIVE SPIRIT of a new millennium, *The California Geographer* published an article on "Fifteen Events that Have Shaped California's Human Landscape" (Dilsaver, Wyckoff, and Preston 2000) (Table 1). Inspired by that piece and the upcoming (2018) annual California Geographical Society meeting in Sacramento, this article recognizes eleven additional events that are strongly revealed in the Sacramento landscape (Table 2), "strong evidence of the kind of people we are, and were, and are in process of becoming" (Lewis 1979, 15). Because the focus of this article is a metropolitan area, the human landscapes under discussion are more often urbanized than was the case in the earlier work. Dilsaver, Wyckoff, and Preston observed that their selected landscape-shaping events tended to involve economic development, technological innovation, and conservation. Those forces are critical to events in this article too, but also highlighted are landscape-shaping processes with more explicitly social dimensions, such as racial discrimination, education, health care, immigration, and commemoration. Often the evidence of change in these aspects of California society is best seen in cities. The focus on a smaller extent of territory also gives more attention to the

role of local agents, as they intersect with state, national, and transnational events and forces, in creating the places around them.

For purposes of this discussion, the boundaries of Sacramento are those of the Sacramento-Roseville-Arden Arcade Metropolitan Statistical Area, which consists of El Dorado, Placer, Sacramento, and Yolo Counties (Office of Management and Budget 2013, 46) (see Figure 1). While this region inspired the choice of events discussed here, they generally have, like the fifteen originals, wide significance across California. The article presents its case for the newly selected events and then describes two places within the region, Folsom in the Sierra Nevada foothills and Woodland in the flatlands of the Sacramento Valley, where landscapes molded by the original article's fifteen events and this article's eleven events can be easily experienced in a few hours of exploration.

Table 1.— Fifteen Events that Have Shaped California’s Human Landscape.

1. Settlement by the First Peoples, 13,000 Years Ago
2. Cabrillo’s Landfall at San Diego, September 28, 1542
3. The Discovery of Gold at Sutter’s Mill, January 24, 1848
4. Initiation of the US Public Land Survey, July 17, 1851
5. San Francisco Takes Water from Lobos Creek, September 17, 1858
6. Creation of Suburbs, 1864
7. Yosemite State (and National) Park, June 30, 1864
8. The Coming of the Transcontinental Railroad, May 10, 1869
9. Electrification of Market Street, April 9, 1874
10. Passage of the Wright Irrigation District Act, March 7, 1887
11. San Gabriel Timberland Reserve, December 20, 1892
12. Sale of First Model T, 1908
13. Wartime Buildup Begins, June, 1938
14. National Environmental Policy Act, January 1, 1970
15. Production of the Intel 8080 Microprocessor, December 1973

Source: Dilsaver, Wyckoff, and Preston 2000.

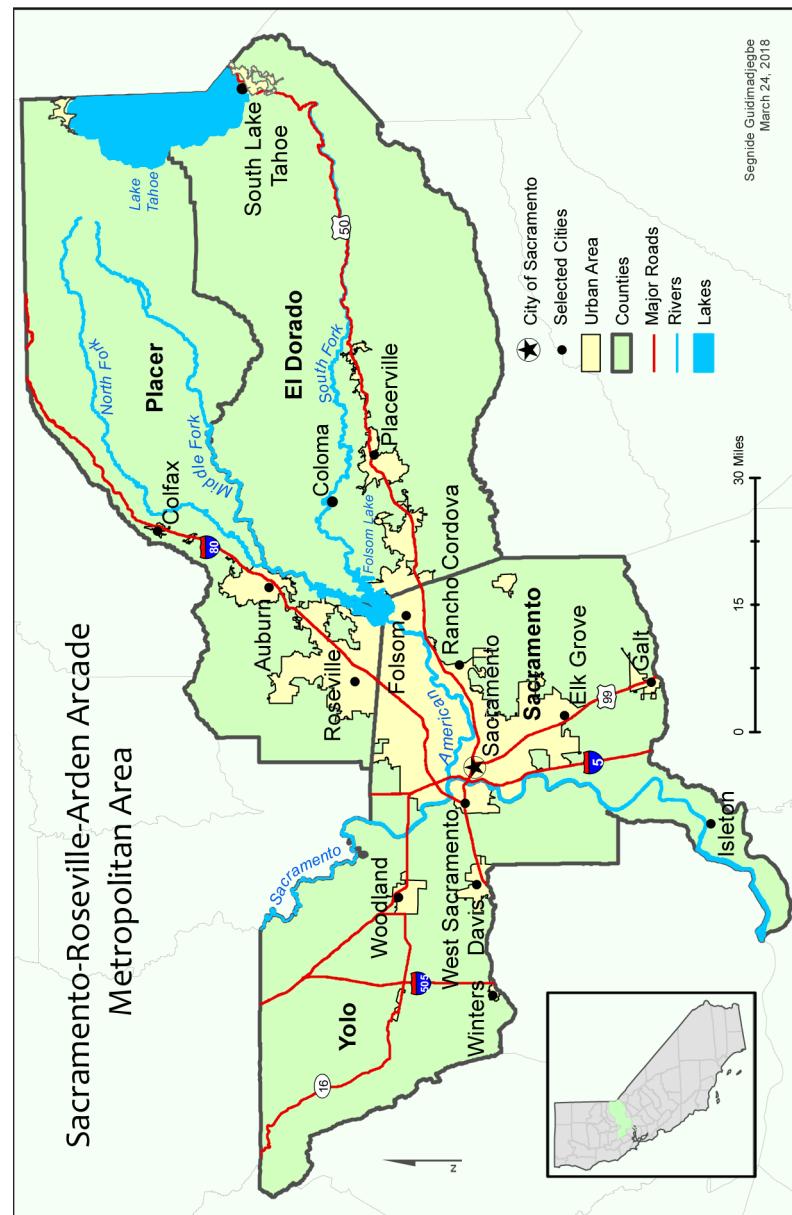


Figure 1.— The four-county metropolitan area used in this study. (Segnide Guidimadjegbe map)

Table 2.—Eleven More Events That Have Shaped Sacramento's Human Landscape.

16. Spanish merchant Juan de Cordoba sends the first enslaved Africans to the Americas, 1502.
17. Governor John Bigler signs legislation making Sacramento the permanent capital of the state of California, February 25, 1854.
18. The Great Atlantic and Pacific Tea Company (A&P) becomes America's first chain retailer, 1871.
19. Governor Earl Warren signs into state law the California Community Redevelopment Act, 1945.
20. The California Master Plan for Higher Education is submitted to the governor and legislature, February 1, 1960.
21. President Lyndon B. Johnson signs into law Medicare and Medicaid on July 30, 1965.
22. President Lyndon B. Johnson signs into law the Immigration and Nationality Act (the Hart-Celler Act), October 3, 1965.
23. President Lyndon B. Johnson signs into law the National Historic Preservation Act, October 15, 1966.
24. Car Shop 9 at the Sacramento Southern Pacific Rail Yards closes, 1980.
25. The City of Sacramento's Planning Department begins issuing permits for restaurant sidewalk seating, 1988.
26. A prolonged drought grips California, October 1, 2011–September 30, 2016.

Event #16: Spanish merchant Juan de Cordoba sends the first enslaved Africans to the Americas, 1502

While they arrived from Spain, it was not long—1517—before slaves were sent directly from Africa to work on Spain's Caribbean plantations, marking the start of the systematic capture, enslavement, and transport of millions of Africans by Europeans to the Americas (National Humanities Center 2006). In 1619, enslaved Africans were transported to Jamestown, making Virginia the first British colony in North America to import them. In 1636, the first American slave carrier, named *Desire*, was constructed and launched from Massachusetts, and five years later, Massachusetts became the first American colony to legalize slavery (Draper 2018). Eventually, 12.5 million enslaved Africans were shipped to the Americas. While under half a million are estimated to have come directly to North America, their descendants today number 42 million African Americans (Gates 2014). Colonists and later settlers also enslaved Native Americans, a practice that continued well into the nineteenth century in the Southwest and California (Gates 2014b;

Lindsay 2012). California eventually entered the Union as a free state in 1850, but at the price of a harsher Fugitive Slave Act (originally passed in 1793).

Intellectual justification for Black slavery was rooted in the Enlightenment idea of the great chain of being, “a God-given hierarchical ordering of the world that included human races” (Greiner 2014, 165). Inequality among the peoples of the world was explained as a result of natural differences in their abilities; White people were at the top of the human segment of the chain and “whiteness became a standard against which others were measured” (Greiner 2014, 165). This way of thought resulted in spatial arrangements and human landscapes that created separate and unequal places for Whites and Blacks (and other people of color); these supported the power of the former and the oppression of the latter across empires, into post-imperial spaces and times, and up to the present day.

Many types of landscapes reveal differences between the lives of Whites and Blacks (or Native Americans or Asians or Latinas/os) across the United States and in California: residential neighborhoods, workplaces, schools, shopping districts, recreation areas, churches, and more. California cities, for various historical reasons, generally do not show the most-extreme levels of segregation nor the greatest contrasts among racialized places (Dingemans and Datel 1995); however, they still have plenty of landscapes that reveal the contours of White privilege. Work on Sacramento's histories and geographies of redlining, racially restrictive covenants, urban redevelopment, and subprime mortgage lending show that the same racial groups, and often the same neighborhoods, repeatedly have been targets of unfair, racially biased government programs and private-sector practices (Hernandez 2009). Again and again, people of color have been denied the better schools, safer neighborhoods, superior public services, higher-paying jobs, and higher rates of home-ownership that have paved the way to wealth accumulation by Whites.

Sacramento has no high-rise public housing estates that in many U.S. cities are quickly read and denigrated as “the projects.” Most people of all races and ethnicities live in post-World War II tract houses and garden apartments (Dingemans and Datel 1995). Still, it is not difficult to read the socio-economic level of a Sacramento neighborhood, nor to see that the poorest neighborhoods are occupied disproportionately by people of color. Neighborhoods with many vacant lots, visibly deteriorated properties, boarded-up structures, substandard public infrastructure, limited commercial investment, chronic problems with illegal dumping, and increasing numbers of homeless people are part of the regional mix.

The City of Sacramento is highly diverse racially and ethnically and has, by American standards, low levels of segregation; in fact, it was reported by *Time* magazine, based on a Harvard study, to be the most integrated city in America (Stodghill and Bower 2002). (The study was silent on integration at the scale of the metropolitan area.) A fairly recent report on the segregation of California's public schools points out that the Sacramento area's several large districts (Sacramento Joint Unified, Elk Grove Unified, and San Juan Unified) are among the most integrated in the state (Orfield and Ee 2014, 4). While compared to other places, Sacramento does better, its patterns of segregation are recognized as contributors to social inequalities; warnings sound from those looking at housing and school trends that policies can change and progress can be reversed (Garvin 2017a; Garvin 2017b; Reese 2014.)

To take another example, geographers and others have analyzed juvenile halls, jails, and prisons as racialized landscape features (Gilmore 2007). The Sacramento region's famous federal penitentiary at Folsom stands out on a map of race—a substantially Black (and to a lesser extent, Latino) “neighborhood” surrounded by much Whiter suburbs (see Figure 2). The block that contains Sacramento County's downtown jail also stands out as significantly Latino and Black when compared to nearby blocks with more Asian and White residents (Weldon Cooper Center for Public Service 2013). Ongoing concerns about school-to-prison pipelines and differential rates of arrest, conviction, and imprisonment for Whites and people of color, as well as high-profile fatal shootings of unarmed men of color by local police, locate places of incarceration in Sacramento's landscapes of racialized injustice (Mott 2018; Vera Institute of Justice 2018; Parvini, Morin, and Winton 2018). Among recent efforts to address some of the racial abuses of the criminal justice system is Sacramento's attempt (following models in Oakland and San Francisco) to redress the unfair impacts of the War on Drugs on people of color by giving those with minor marijuana convictions some preference in issuing licenses for pot shops (Mock 2018). Sacramento is also a sanctuary city in a sanctuary state, where temporary landscape manifestations, such as rallies and vigils, signal support for policies that restrict local law enforcement from working with federal immigration authorities. Several local jails and juvenile halls are targets for those who argue that they should not have detention contracts with federal Immigration and Customs Enforcement (Ternus-Bellamy 2018).

The inequalities created by institutionally embedded racism over hundreds of years across the U.S. are pernicious and persistent. While the Sacramento



Figure 2.—The City of Folsom prefers that its famous state prison be viewed through the lens of Johnny Cash's music, and it recently opened up a recreational trail with that theme. America's and California's heavily racialized criminal justice systems provide more uncomfortable lenses to look through. (Author photo)

region is a place where those inequalities are in many instances smaller and represented less dramatically by landscapes of segregation than in many other American cities, they remain significant features of the lived experience of its people.

Event #17: Governor John Bigler signs legislation making Sacramento the permanent capital of the state of California, February 25, 1854

The 1849 constitutional convention met in Monterey, the capital of Mexican Alta California. It named San Jose, another Mexican settlement, as state capital. San Jose was not ready to host the state government, and out of the ensuing competition emerged the City of Vallejo. However, it, too, was unready, presenting an opportunity for Sacramento, where the state legislature met briefly in early 1852. Flooding sent it packing to Benicia, which was judged to be too small a town for the state capital. Sacramento offered its newly constructed county courthouse and a block of city land on which to build a permanent capitol building. This offer was accepted, and even though that courthouse burned to the ground, the state government came to rest in the replacement courthouse in 1855. The major flooding of

1861–62 led to one final hiatus, in San Francisco, but the state government's return to Sacramento in January 1863 proved permanent. In 1869 it moved into the building still occupied today by the legislature and governor (Avella 2003, 41–43) (see Figure 3).



Figure 3.—As the seat of state government, Sacramento has a large lobbying force and experiences numerous promotional efforts such as this “Be Californian—Buy California Grown” event on the grounds of the Capitol. (Author photo)

Capturing the state government function would prove among the most important events in shaping Sacramento's human landscape up to the present time. When Sacramento became the state capital, the role of state government and the financial resources it commanded were modest. Nearly all state offices were housed in the Capitol building until what are now called the Stanley Mosk Library and Courts Building and the Jessie M. Unruh State Office Building were constructed in the 1920s. The role of the state government continued to expand during the Great Depression, World War II, and California's post-World War II boom. Numerous additional structures were built for the state in the 1950s and 1960s, with others added at a more modest rate subsequently. The state has also rented millions of square feet of space in Sacramento's core through the decades. It has bought up many blocks near the Capitol and created a joint-powers authority with the City of Sacramento, the Capitol Area Development Authority, to manage this

property. CADA turned out to be one of the few entities that developed new housing in the core during several decades when most residential builders abandoned it (Datel and Dingemans 1994, 572).

The presence of the state of California has made Sacramento the largest, most prosperous, and most culturally diverse city in California's Central Valley. The presence of state government has meant a solid base of middle-class, white-collar and blue-collar, unionized jobs that have helped buoy the city core and grow the suburbs. Yes, corporate headquarters and billionaires are thin on the ground, a fact frequently regretted by those seeking charitable contributions. Yes, a lot of the area's elected power-elite have loyalties to other regions, to which they and their staffs intermittently decamp. Yes, Sacramento seems like a Midwestern version of California. But if Sacramento were not the state capital, the city would be even less like coastal California—it would have less money, a less educated workforce, less cosmopolitanism, and less political power.

This event, so critical to the Sacramento region, was not particularly significant to other places in the state, except in the sense that it helped spread some of the state's wealth and power into the interior, so that coastal California did not become even more dominant. It makes the point that there are factors like this for many cities—that some specialized feature or function often sets them apart from a more generalized portrait that emerges from state- or national-scale forces.

Event #18. The Great Atlantic and Pacific Tea Company (A&P) becomes America's first national chain retailer, 1871

The predecessor of the A&P grocery store chain was a single New York store in the 1850s, a local chain of five stores in 1863, and a nationwide mail-order company by 1866. Then, following the Great Chicago Fire of 1871, it quickly opened its first out-of-state stores in the recovering city. At that point, it was still largely a purveyor of tea. By 1884, its chain had links as far as Atlanta and Kansas City. By 1900, the company had incorporated, operated 198 stores, and was becoming the country's first grocery store chain. By 1925, it had 13,961 stores, consolidated into 4,000 supermarkets and 500 small stores by 1950. By the end of that decade, A&P had survived multiple anti-trust lawsuits brought against it by the federal government (Levinson 2011).

This event was not selected because of A&P's presence in California, although it did operate in the southern part of the state until 1969 (grocereteria.com 2009). It was selected because, as the country's first extensive retail chain, it kicked off the chaining of America by retailers, restaurants, and, increasingly,

service firms. By 1997, 61 percent of retail business in the United States was done by chains (Jarmin, Klimek, and Miranda 2005). And in the process of becoming economically dominant, these businesses also came to be major shapers of America's, California's, and Sacramento's commercial streets and shopping centers.

Of the world's top ten retail firms (by revenue) in 2017, seven are present in the Sacramento landscape: Walmart, Cosco, Kroger (owner of locally present grocery store chains Ralphs and Food4Less), Walgreen Boots Alliance, The Home Depot, Aldi (owner of Trader Joe's), and Amazon (which has a fulfillment center in Sacramento) (Deloitte 2017). The country's top ten brick-and-mortar apparel sellers are all well represented in local malls (Laney 2015). Of the top hundred fast food chains on Wikipedia's list, the Sacramento region has outlets of most of those headquartered in the United States as well as some headquartered abroad. Because of its crossroads location, Sacramento has long had many hotels and motels. Most of these once-independent hosteries are gone or now provide low-end, longer-term accommodation, while a steadily increasing share of rooms belong to international hotel/motel chains.

The transformation of Sacramento's oldest shopping center and the opening of its newest one embody the chain business trend. Often identified as one of the oldest shopping centers west of the Mississippi and the oldest in California, Town & Country Village opened in 1946 in Sacramento's northeast suburbs. Using salvaged materials, builder Jere Strizek crafted a low-slung ranch-style complex of white stucco walls, red tile roofs, dark beams and posts, and displays of Westerniana. Through most of its decades, the shopping center housed about sixty independent businesses. Gradually they slipped away, and now, in blandly remodeled larger spaces, are Trader Joe's; TJ Maxx; Bed, Bath, & Beyond; and Ross Dress for Less, among other chains. Many regrets have been expressed for the loss of characterful buildings and shops: "the shopping center has been highly modified beyond its original state already. Perhaps the saddest part of the story is how individual and unique local boutiques have been pushed out by franchises" (SacMod 2012). Unlike San Francisco, Sacramento has not intervened to regulate "formula retail" (Lagos and Dineen 2014). In addition to invading many older spaces, it entirely fills new shopping centers: Delta Shores, a new one-million-square-foot shopping center on the southern edge of Sacramento, currently is being leased (see Figure 4). Of the sixty-eight spaces taken up so far, nearly every one is a chain retailer, a chain restaurant, or a chain service provider (Delta Shores 2018). The commercial landscapes, especially in shopping centers



Figure 4.—*Signs at Delta Shores, Sacramento's new, one-million-square-foot shopping center on the city's south side, display familiar national or regional names. Although not fully leased, the center's current mix is 100 percent, or nearly so, chain businesses or "formula retail."* (Author photo)

and malls, of much of the Sacramento region increasingly look like those of every other American metropolitan area. People across the country have more in common, but local strength of character is reduced.

Event #19: Governor Earl Warren signs into state law the California Community Redevelopment Act, 1945

This law allowed any California city or county to establish a redevelopment agency (RDA) with power to declare areas "blighted" and to create programs to remedy those conditions. Redevelopment agencies could tap into federal funds made available under the Housing Act of 1949 for slum clearance and the construction of public housing. Additional state legislation in 1951 and an amendment to the state constitution in 1952 made it possible for redevelopment agencies to use Tax Increment Financing (TIF) to fund their projects. Typically, they would sell bonds in order to obtain the money needed for a project, and then pay off the bonds using the additional property tax revenue generated by the improved property in the redevelopment area (Black 2014).

Redevelopment came to have a significant impact on California cities, particularly their older, inner districts. In 1966, there were twenty-seven redevelopment project areas in California; in 1976, 229; and in 1988, 524 (Blount et al. 2014, 1–2). All four counties and nineteen of the twenty-one cities in the Sacramento metropolitan area had redevelopment agencies at some point. None had a bigger impact than that of the City of Sacramento.

From the late 1940s to the late 1950s, various Sacramento civic leaders prepared for redevelopment, undertaking social and economic studies; entertaining various proposals by architects, planners, and developers; and working on financing strategies. During this period a whopping 233 blocks—about a third of the entire Old City (a now largely unused name for the part of Sacramento that occupies the twenty-six- by thirty-one-block grid laid out in 1848)—were identified in various plans as blighted and in need of redevelopment (Avella 2003, 127). Many blocks of the West End, the area between the Capitol building on Tenth Street and the Sacramento River waterfront, were targeted. For years, civic leaders had complained that the West End was a shameful slum greeting visitors entering Sacramento from the west, a rotten setting for the jewel of the state Capitol building. It was also an economically important part of Sacramento, packed with small businesses, many owned by immigrants, and home to a large casual labor market serving Central Valley agriculture and industry. Diverse ethnic groups, including African American, Chinese, Japanese, Filipino, Mexican, Native American, Portuguese, Slavic, and South Asian, shared the space.

Despite considerable opposition from many residents, local business owners, and anti-tax groups, redevelopment plans were adopted and financing was secured, pleasing developers, contractors, large West End and downtown property owners, and many civic leaders. In 1957, the ceremonial demolition of a Victorian structure at Sixth and Capitol marked the start of the radical transformation of many of Sacramento's oldest blocks (Avella 2003, 128–129) and their replacement with what a visitor sees today: a rather sterile, broad, office-tower-lined boulevard leading to the Capitol building and grounds, additional blocks of offices and other commercial buildings, a pedestrian mall on K Street, a local government precinct, a convention center, some low-rise and midrise housing, and several blocks designated an Old Sacramento historic district (Simpson and Prince 2013). Aiding and abetting this radical transformation of Sacramento's West End was the construction of Interstate 5 and the W-X (US 50 and Business 80) freeways.

Redevelopment's imprint on many blocks of Sacramento's Old City is easy to see. For the impacts of redevelopment's displacement of thousands of residents, one must look more carefully. What resulted was their replacement with far fewer people, who were Whiter and wealthier. The ethnic mix of those displaced underwent a process of sorting as they moved out, often without financial help. As redevelopment removed one single-room occupancy hotel after another in the downtown, many former occupants were added to the homeless population. African Americans were steered to Oak Park and Del Paso Heights, neighborhoods that already had some Black residents. Mexican Americans moved to Alkali Flat and Washington in the Old City, as well as to Franklin Boulevard outside it. Chinese, Japanese, and Filipina/o settlement shifted southward, both within the Old City and beyond (Dingemans and Datel 1995).

Later, redevelopment areas were established beyond the Old City in some of the neighborhoods whose social character had been changed in part by those displaced from the West End, including Oak Park, Del Paso Heights, Franklin Boulevard, and Stockton Boulevard. Federal and state regulations increasingly forced projects to be somewhat more responsive to local residents' needs and wishes. Later projects did a somewhat better job of embracing what was supposed to be one of redevelopment's first priorities, the production of affordable housing. Unfortunately, in Oak Park, among the sites chosen for public housing were stretches of Thirty-fifth Street, the neighborhood's traditional "Main Street," so the area lost big pieces of its most economically and culturally valuable townscape (see Figure 5). Suburban-style housing complexes now sit where previous generations shopped in the five-and-dime, ate chop suey, watched movies, and sipped the output of Sacramento's first espresso machine—and where Black activists organized for political and social change (Datel 2010).

Also changing over time was redevelopment's emphasis on demolition and new construction. In Sacramento, as all across the U.S., a grassroots historic preservation movement rose up against the destruction wrought by "the federal bulldozer." This story will be picked up below under event #22. Collectively, redevelopment projects across the region delivered a mix of enhanced infrastructure, new construction, and rehabilitated older buildings.

Redevelopment suffered from economic and power abuses (Blount et al. 2014). Because of that and the state subsidies it received, it fell from grace during tough budget times, and Governor Jerry Brown axed it in 2011; all RDAs in California have been dissolved. Left behind in the Sacramento re-



Figure 5.—Redevelopment in Sacramento's Oak Park neighborhood included the construction of affordable housing units such as these. To build them, stretches of Oak Park's "Main Street" were demolished, removing both evidence of the area's history, including important Black history, and potential economic resources. (Author photo)

gion and elsewhere in California are patterns of property ownership, property value, social geography, land use, and landscape altered by redevelopment.

Event #20: The California Master Plan for Higher Education is submitted to the governor and legislature, February 1, 1960

As part of California's post-World War II major infrastructure investment, the state made a substantial commitment to the expansion of public higher education. Recognition of the central importance of California's colleges and universities to leadership, citizenship, and economic development was already widely shared by voters and legislators, having been an important part of the state's progressive agenda in earlier decades. The University of California (UC), the proto-California State University (CSU), and junior colleges (later the California Community Colleges, CCC) had been evolving vigorously and multi-locally for decades when Clark Kerr became the UC president. He called for a higher-education plan to guide the growth and integration of a complex system already bursting with veterans and increasing numbers of high-school graduates (Thelin 2017).

A Master Plan Survey Team produced a 246-page report, *A Master Plan for Higher Education in California, 1960–1975*. This report was approved by the State Board of Education and the UC Board of Regents. The Donahoe Act, passed by the legislature, put into statutory law some of the plan's provisions, including the differentiation of the missions of the three pre-existing systems. It was signed by Governor Pat Brown on April 14, 1960. A constitutional amendment was passed by the voters of California in November of the same year; this created a new Board of Trustees for what is now the California State University. Additional legislation followed quickly that approved increased funding, increased student aid, and three new UC campuses, four new CSU campuses, and twenty-two new community college campuses.

California's higher education infrastructure was admired as accessible (initially it was tuition-free at all levels), excellent, and full of options. It became a key part of the California Dream. It has been widely recognized as a key contributor to California's world-class economy (UC Office of the President 2011; CSU Office of the Chancellor 2010). Despite problems of accessibility and affordability that have emerged over several decades (starting with property-tax-cutting Proposition 13 in 1978), California's higher education landscape is critical to the state's prosperity and society.

Sacramento's four-county region is home to UC Davis, CSU Sacramento, and approximately a dozen community colleges and outreach centers in five community college districts (see Figure 6). UC Davis has the most students (about 38,000), the largest campus (two campuses, in fact: the main campus in Davis, and the medical campus in Sacramento), the biggest budget, the biggest regional economic impact, and the highest-profile amenities used by the public, which include nature reserves, an arboretum, performance and sports venues, galleries, and an annual open house called Picnic Day (University of California, Davis, and UC Davis Health System 2016). UC Davis makes Davis a college town, one with progressive politics, thousands of bikes, and dozens of inexpensive restaurants and cafes (Gumprecht 2009, 145–188). As a regional university, Sacramento State has a hefty local economic impact, producing a high percentage of the area's workers with college degrees, including many of its police, teachers, nurses, and state employees (California State University Office of the Chancellor 2010). Its sports and recreational facilities and spaces for the arts make important contributions to Sacramento's athletic and cultural life. This is true of many community colleges as well, which not only have provided two-year degrees and many certificates to their students (now about 75,000 in the Los Rios district alone) as well as readiness to transfer to four-year institutions, but



Figure 6.—Community college districts have spread their influence by building outreach centers that bring opportunity to many quarters of the Sacramento region. Shown here is Sacramento City College's West Sacramento's center, where good bus service and a growing network of bike lanes contribute to an affordable landscape of higher education. (Author photo)

also have provided their neighbors with diverse educational, social, and cultural programming.

Because of the affordability and geographic spread of community colleges to the suburbs and outlying towns, accessibility to these resources has been high. UC Davis, Sacramento State, the region's community colleges, as well as many of its high schools, also should be recognized for their leadership of progressive social movements, such as the Black student unions of the 1960s and 1970s that promoted civil rights protest and the establishment of ethnic studies departments (Covin 2009, 26). These programs, by making higher education more welcoming to people of color, helped change the faces of higher education in Sacramento and beyond. Today, the campuses provide progressive leadership in environmental sustainability (Cosumnes River College 2018; California State University Sacramento 2018).

Event #21: President Lyndon B. Johnson signs Medicare and Medicaid into law on July 30, 1965

Medicare is federally funded health insurance for the elderly, and Medicaid is state and federally funded health insurance for low-income people. Federal and state commitments to health insurance expanded with further amendments to the Social Security Act; at the same time, private health insurance, often employer-provided, increased in popularity. By 2009, third parties paid almost 90 percent of the total cost of health care in the United States (Fuchs 2012, 977). The spread of public and private health insurance, together with more technology and more specialization, are the main culprits in the dramatic increase in the share of the GDP accounted for by health expenditures: 4.6 percent in 1950 versus 17 percent in 2009, “a larger share than all manufacturing, or wholesale and retail trade, or finance and insurance, or the combination of agriculture, mining, and construction” (Fuchs 2012, 973).

The Sacramento region's economy and landscape reflect the importance of the health sector in today's metropolitan areas. In Sacramento County, four of the top ten employers (as measured by number of local employees) are large medical providers: Kaiser Permanente, UC Davis Health, Sutter Health, and Dignity Health, each with 8,000 to 11,000 local employees. In each of the metro area's three other counties, two or three medical providers or insurers are among the top ten employers (Sacramento Business Journal 2017, 65–71). The large healthcare providers also have important philanthropic arms that provide major funding for healthcare programs and health education to schools, local governments, and community non-profit organizations working to reduce health disparities among population sub-groups and neighborhoods.

Major healthcare providers' large building complexes, plus the additional care-related businesses and facilities that cluster around them, are among the most impressive examples of specialized commercial land use in the region today. Established neighborhoods in Midtown and East Sacramento have had to accommodate their growth, and the development of outer areas has been stimulated by the construction of newer suburban campuses in Roseville and South Sacramento. Kaiser Permanente has announced a commitment to build a large new campus in the deindustrialized railyards district just north of downtown Sacramento (see event #24), while Dignity is planning a major expansion in Folsom. Most impressive has been the growth of the UC Davis Medical Center on inner Stockton Boulevard, made possible by its acquisition of the old state fairgrounds (see Figure 7). The evolution of



Figure 7.—The University of California-Davis Sacramento [Medical] Campus tripled its size to 3.4 million square feet from 1990 to 2010. Highly visible, large medical complexes are increasingly important economically and socially to the Sacramento region's cities. (Author photo)

this complex from its first appearance in 1852 as the Sacramento County Hospital into today's mammoth health campus combining treatment, teaching, and research has attracted ancillary land uses and stimulated demand for housing in surrounding areas, thus contributing to the gentrification of northern Oak Park and other nearby neighborhoods (UC Davis Health System 2010; Maciag 2015). Programs in numerous fields of medicine and medical research have been started or expanded at all levels of the region's higher-education system, reflecting an important education-medicine nexus (see event #20).

Event #22: President Lyndon B. Johnson signs into law the Immigration and Nationality Act (the Hart-Celler Act), October 3, 1965

This legislation, which today remains the basis of U.S. immigration policy, changed the origins of most immigrants to America, as well as significantly enlarging their numbers. These outcomes were unexpected at the time: "The bill that we sign today is not a revolutionary bill," President Johnson said during the signing ceremony. "It does not affect the lives of millions. It will not reshape the structure of our daily lives, or really add importantly to ei-

ther our wealth or our power." Senator Ted Kennedy (D-MA), the bill's floor manager, stated: "It will not upset the ethnic mix of our society" (quoted in Chishti, Hipsman, and Ball 2015).

In 1921, Congress had put into place a system that favored immigration from Northern and Western Europe. Annual quotas were set at 2 percent of the foreign-born population of each nationality, as counted in the 1890 Census (notice the choice of Census year, before the large influx of people from Eastern and Southern Europe). Immigration from the latter, as well as from Asia (also excluded by earlier legislation), Africa, and the Middle East, was severely limited. In 1952, when Congress passed another immigration bill, they missed a chance to overhaul this approach.

By 1965, voices raised against the racist and eugenicist thinking behind the 1921 system had grown more insistent, both inside and outside the country. Its biased quota system became an embarrassment to a United States that claimed to be a beacon for equality and fairness. The new legislation scrapped the old quota system, and instead a system of preferences based on family relationships to U.S. citizens or legal permanent residents, and on job skills, was enacted. Caps were placed on the total number of immigrants from the Eastern Hemisphere (170,000) and from each country therein (20,000). For the first time, flows from the Western Hemisphere came under immigration law, with a cap of 120,000. A later amendment added the 20,000 cap per country to that region. Spouses, minor children, and parents of U.S. citizens were in all cases not counted under the caps.

The effects of this were surprising to many, including those who voted for the bill. It was conservatives who had argued for prioritizing family reunification over job skills, hoping to preserve the White Anglo-Saxon Protestant population as much as possible. However, demand for immigration to the U.S. from Europe dropped off, while it soared from other regions, particularly Latin America and Asia. The year 1965's nearly 300,000 new greencard holders ("lawful permanent residents") more than tripled to about 1 million per year by the mid-2000s. The 9.6 million foreign-born citizens in 1965 more than quadrupled to an all-time high of 45 million in 2015 (Chishti, Hipsman, and Ball 2015).

California's population is now 27 percent foreign-born, while Yolo County's stands at 22.2 percent, Sacramento County's at 20.5 percent, Placer County's at 10.5 percent, and El Dorado County's at 9.4 percent (American Factfinder 2018). Asia (41 percent), Latin America (33 percent), and Eastern Europe (11 percent) together were the sources for 85 percent of the four-county Datel: Sacramento's Human Landscape

Sacramento region's foreign-born population. As of 2005, the share of the Sacramento region's foreign-born population that lived in the suburbs (72 percent) was not far behind that of the native-born population (79 percent). Some foreign-born groups were more suburbanized than native-born residents, including Koreans, Ukrainians, and South Americans. In other words, newcomers and their landscape tastes were not concentrated in central city enclaves, but widely spread across the region (Datel and Dingemans 2008).

Because of these residential patterns, the presence of diverse immigrant and refugee groups is widely seen and felt. While, overall, groups tend to live in loose clusters and be intermixed with other groups, it is possible to encounter a block of single-family homes or an apartment complex occupied almost entirely by one group. More obvious to outsiders are the immigrants' contributions to commercial, religious, media, sports, and festival landscapes. Sacramento's Vietnamese (and other Asian and non-Asian) immigrants and their families have created a nationally significant "Little Saigon" commercial district along Stockton Boulevard; the metropolitan region also houses more modest clusters of Latino businesses (Franklin Boulevard and Woodland) and Slavic enterprises (northeast Sacramento County). Places of worship for communities from all over the world dot the Sacramento landscape; among the largest and most prominent are some very large churches that are home to refugee Slavic Protestant congregations (see Figure 8). Sporting events and festivals involving immigrants and their children and grandchildren fill urban and suburban playing fields, parks, community centers, school playgrounds, and shopping-center parking lots. Loci of "Establishment History," such as Old Sacramento, host the music, costume, dance, color, and food of diverse cultures that are layering their cultural representations on top of those of the Gold Rush and transcontinental railroad. Dozens of languages can be heard or read in local media, and many schools in the Sacramento region have sizable cohorts of English Learners. Today, Sacramento's ethnic diversity and the landscapes associated with it, enabled by the 1965 changes to U.S. immigration law, are important dimensions of its place identity (Datel and Dingemans 2008).



Figure 8.—Places of worship are major landscape expressions of immigration in Sacramento. The Evangelical Christian Baptist House of Prayer, also called Bryte Church, reflects the repeated history of West Sacramento's Bryte neighborhood as a destination for Russian immigrants. (Author photo)

Event #23: President Lyndon B. Johnson signs The National Historic Preservation Act into law, October 15, 1966

In the face of losses of valued sites and landscapes, powerful voices called for strengthened federal leadership in the realm of historic preservation (United States Conference of Mayors 1966). While those losses could be laid at the door of broad forces of population growth and economic expansion, they also could be traced to specific federal government programs, including urban renewal, freeway construction, and large dam projects. The 1966 Act created a National Register of Historic Places to which diverse types of cultural and historical properties of local, state, or national significance could be nominated. If eligible for listing, a property would receive certain protections and resources. Each state would have a State Historic Preservation Office to administer the new federal preservation programs.

Nationwide, more than 90,000 properties representing 1.4 million individual resources—"buildings, sites, districts, structures, and objects"—have been listed (National Park Service 2018a). The four-county Sacramento region has 171 individual entries, as well as properties that are part of statewide
Datel: Sacramento's Human Landscape

multiple resource listings (e.g., Carnegie Libraries of California or Highway Bridges of California) (National Park Service 2018b). Many have been protected from damage by federally financed or regulated activities. Many have benefited from preservation tax credits, grants, and/or the use of special historical building codes (see Figure 9). Extensive professional research has been undertaken in archaeology, architecture, history, and related fields as communities all over the country have inventoried, documented, evaluated, nominated, and preserved their cultural resources with help from federal and state governments. The legacies of diverse regions, peoples, events, social movements, technologies, and architectural styles have been recognized and protected because of the National Historic Preservation Act of 1966.



Figure 9.—The distinctive Jackson Apartment building is part of Woodland's Main Street historic district, which is listed on the National Register of Historic Places. Historic preservation has helped maintain the area's classic "Main Street" morphology, including supporting renovation with federal tax credits. (Author photo)

Alongside federal efforts, grassroots historic preservation movements and local government preservation programs have flourished across the U.S. and in Sacramento (Datel and Dingemans 1980). Though the first local historic district was created by the City of Charleston, South Carolina, in 1931, most of the 2,300 local governments with preservation ordinances passed them

in the 1960s or later (Beaumont 2002). The City of Sacramento temporarily protected twelve blocks of the West End threatened by redevelopment in 1960, while the details of preserving part of the area were worked out, and in 1968, Old Sacramento became the first historic restoration project in the western U.S. to receive federal urban renewal funds (Datel and Dingemans 1980, 239). By 1975, the city was ready to pass an ordinance that allowed it to designate and regulate qualifying landmarks (individual properties) and districts anywhere in the city. Currently, there are thirty-two districts and hundreds of landmarks, mostly located in the city's original grid. Sacramento is a "Certified Local Government," which means its historic preservation program meets certain federal criteria and gains access to extra resources. Davis and Elk Grove in the Sacramento area also have this status.

A great deal of the energy behind Sacramento's historic preservation success has been provided by the Sacramento Old City Association (SOCA). This organization was founded in 1972 by a handful of young, White, well-educated households who wanted to live close to their work downtown in up-until-then underappreciated old Victorians. They fought redlining, finally persuading financial institutions to loan them money to buy, repair, and often un-subdivide these structures. They grew their organization into a successful lobbying force in favor of preservation and other policies favoring in-town living, such as traffic calming, downzoning, and mixed-use development (Datel and Dingemans 1994).

Several decades of SOCA's activism contributed to a livelier Old City without much gentrification (Datel and Dingemans 1994; Maciag 2015); the story has been different in the new millennium. One study, using home values and educational attainment as indicator variables, concluded that six of twelve census tracts in the Old City had gentrified between 2000 and 2009–13 (Maciag 2015). Preservation helped make the Old City an attractive place to live again for people with numerous choices, and the area has received a lot of new residential, commercial, culinary, and cultural investment.

Now preservation, like redevelopment, has moved beyond the Old City, into neighborhoods of 1940s romantic cottages and 1950s mid-century moderns. SOCA has become Preservation Sacramento, a name change reflecting the organization's interest and activism beyond the Old City (Preservation Sacramento 2018). In the region beyond the City of Sacramento, although only a few local jurisdictions have preservation ordinances with teeth, every city and county in the metropolitan area has some policies in place to protect cultural resources. Many have found ways to invest in individual

landmarks and historic districts. And all jurisdictions are subject to the provisions of the National Historic Preservation Act of 1966 that constrain the federal government from financing or permitting careless destruction of landscape elements that offer a sense of orientation to the American people (Datel 1985).

Event #24: Car Shop 9 at the Sacramento Southern Pacific Rail Yards closes, 1980

The completion of the first transcontinental railroad in the United States is event #8 in Dilsaver, Wyckoff, and Preston (2000). To Sacramento, the railroad meant not only radically improved connectivity, but also local industrialization. The city's Central Pacific, later Southern Pacific (SP), shops became one of the largest industrial complexes in the western U.S. They manufactured virtually everything needed to run a railroad, including locomotives and diverse types of freight and passenger cars. For decades, SP was the largest employer in town: "it appears that between the 1880s and the 1920s about 15% of Sacramento's workers worked in the shops, though around 1900 this figure may have been as high as 25%" (Dougherty 2002, 5). SP was a major driver of immigration to Sacramento, shaping the ethnic character of various neighborhoods, and it was a powerful force in state and local politics.

The last locomotives to be built by the Sacramento SP shops were completed in the 1930s. As early as the 1940s, the Sacramento shops had begun phasing out the construction of more-complicated types of freight cars (Dougherty 2002, 7). By 1980, the manufacturing function of the shops was gone, although they continued to do repairs and maintenance until the final closure of the whole complex in 1999. Some of those jobs were retained in the region, relocating to the J. R. Davis classification yard in Roseville, the largest on the West Coast (Union Pacific 2018). The few remaining buildings on the 240-acre site will be preserved and become part of the nearby California State Railroad Museum (see Figure 10). Visitors will be able to observe restoration and maintenance work being done on old rolling stock. Instead of manufacturing, there will be the commemoration of manufacturing. Progress has been made on cleaning up the toxic byproducts left by over a hundred years of railroad work, and new infrastructure is in place, awaiting the construction of an almost entirely new, mixed-use landscape adjacent to Sacramento's central business district (Downtown Railyard Venture LLC 2018).

Canning was another major manufacturing industry in Sacramento that has largely disappeared. The closure of the last remaining large facilities,



Figure. 10.—Some historic buildings remain after the deindustrialization and clearance of the Sacramento Railyards (formerly the Southern Pacific Company Sacramento Shops). They provide a backdrop for Sacramento's growing homeless population living in tents, in this case staked on new transportation infrastructure built to serve future development. (Author photo)

Libby, McNeill & Libby, Calpak/Del Monte, and Bercut Richards, in the 1980s and 1990s reflected customer migration to frozen and fresh fruits and vegetables, as well as mechanization and consolidation of canning operations (Armstrong 2013; Armstrong 2015; JRP Historical Consulting LLC 2006). Blue Diamond Almonds and Campbell's Soup were the last large canning operations left in Sacramento. Campbell's had arrived in 1947, choosing a trackside location south of downtown Sacramento. That choice influenced Sacramento's social geography, including anchoring Latino neighborhoods nearby. The cannery was the oldest Campbell's plant in the U.S. when it closed in 2013 (McCoy 2012). Today it has been divided up into smaller spaces. The largest tenant is Macy's, which operates a fulfillment center for their online sales. Now only Blue Diamond survives, supported by California's impressive expansion of almond acreage in recent years.

Sacramento once had a piece of the "military-industrial complex." Mather Air Force Base (peak employment 22,000), McClellan Air Force Base (6,000-7,000), and the Sacramento Army Depot (4,000) were major employers in

the area (Avella 2003, 104–105). Like the railroad, these employers shaped the immigration story of Sacramento, most notably in the case of African Americans, who arrived in large numbers during and after World War II. All three of the military installations have been decommissioned, peace dividends of the end of the Cold War. While some space in these facilities has been filled with jobs in the manufacturing sector, the total jobs provided remain way below those on offer to civilian and military employees during their active years. Private company Aerojet General, located in the suburb of Rancho Cordova, once employed 22,000 people in the design, manufacturing, and testing of aerospace products, including rocket engines that took America to the moon (Avella 2003, 118, 148). Aerojet shed labor for decades after its peak employment in the 1960s and announced in 2017 that most remaining jobs were moving elsewhere. Those left behind would manage the sales of the company's large land holdings, which are likely to become mostly residential developments (Glover 2017).

Deindustrialization has made possible the increasing use of the Sacramento River waterfront for leisure activities. Old Sacramento is an example of that, and plans are in place for compatible development to the south, where the California Automobile Museum is already located, and to the north, where a science center is planned in an old power station (Lillis 2017). Across the river, the City of West Sacramento has vigorously pursued the deindustrialization and redevelopment of its waterfront, in some cases clearing shuttered manufacturing facilities and in others subsidizing the moves of still-functioning businesses, thus freeing up the waterfront for residential, commercial, office, and entertainment functions (Locke 2017).

A final example of the Sacramento region's deindustrialization has occurred in the R Street industrial corridor, which developed along the Sacramento Valley Railroad that connected Sacramento to Folsom in 1856. As manufacturing businesses, such as iconic Palm Iron Works (b. 1886, d. 1993), closed or relocated to truck-friendly sites in the suburbs or farther afield, preservation advocates lobbied successfully to protect the area from being bulldozed and filled with speculative office buildings (Vellinga 1993; Datel and Dingemans 1994, 572). Today many formerly gritty industrial buildings now provide an “industrial chic” setting for restaurants, bars, clubs, art studios, and artist lofts.

In 1910, 32 percent of the American labor force worked in the manufacturing sector; today 9 percent do (US Bureau of Labor Statistics 2016). In metropolitan Sacramento, the share is only 3.5 percent (US Bureau of Labor

Statistics 2018). The causes of deindustrialization are complex, and no one single causal event could be identified; thus, the end of manufacturing in Sacramento's historic railyards stands as an example of the process. Like many other deindustrialized spaces in the region, the railyards eventually will make major new economic contributions while preserving some evidence of its past. That evidence should be used in part to tell the stories of the work and workers no longer present.

Event #25: The City of Sacramento's Planning Department begins issuing permits for sidewalk seating to restaurants, 1988

Prior to 1988, a sidewalk seating permit had to be obtained from the Department of Public Works, whose priority was keeping sidewalks clear; consequently, “there was just an unwritten policy that opposed all outdoor cafés,” according to Dick Hastings, head of the city’s Design and Preservation Division (Vellinga 1994). Sometime earlier, Masako Yniguez, owner and operator of Capitol Palm Café at Thirteenth and O Streets, found herself fighting health inspectors over her pioneering outdoor seating, but they relented when she agreed to bring the chairs and tables in by mid-afternoon (Burg 2013, 149). By 1987, the city was looking for ways to animate the downtown, and the Planning Department took over the issuance of permits for sidewalk dining. Soon, demand spread the option to elsewhere in the city (Vellinga 1994). Today, sidewalk eating and drinking are widespread throughout the region (see Figure 11). Many restaurants have also put seating in courtyards, patios, porches, and other outdoor spaces.

The diffusion of sidewalk seating for cafés and restaurants made more visible the growing significance of eating and drinking establishments in the social life and economy of Sacramento. With so much manufacturing disappearing from the urban scene, the activities of cooking and serving loom larger; it has even been said that “restaurants are the last bastion of urban manufacturing” (Feldman 2015). And now that a great deal of retail has decamped to the Internet and warehousing districts, restaurants are even more critical occupiers of commercial space: “restaurants are woven into city planning, neighborhood development, and real estate unlike any other time in history” (Feldman 2015). At the same time, American families are pressed for time and do less cooking; in fact, they spend as much money now on eating out as on eating in (Thompson 2017). Housing units in expensive urban markets, which include central Sacramento, have begun to shrink, so that residents are more inclined to do their entertaining at their favorite “third space” rather than at home (Butler and Diaz 2016). Yet another contributing factor to the rise of the restaurant city is the fact that



Figure 11.—Sidewalk seating awaits patrons in historic Folsom. The metro area's pre-automobile urban fabric with high walkability, whether in central city or suburb, has been especially successful in creating clusters of restaurants, but automobile-oriented locations have also experienced the "restaurantization" of commercial districts. (Author photo)

other status-conferring goods, such as music, have now lost their ability to exclude (anyone can access virtually any music they want instantly, and for a modest price, online), but expensive dining preserves its ability to confer status on the prosperous and discerning (Wei 2015).

Restaurants, cafés, bars, and now craft breweries are widely understood to be important place-makers, for both residents and visitors. Neighborhood reputations are made via their eating and drinking spots (Flint 2014). The cool restaurants and bars in Sacramento's R Street corridor, once a trackside industrial area, have helped attract additional commercial and residential development. Hipster-oriented coffee places, restaurants, and breweries are signs of gentrification in Sacramento's North Oak Park neighborhood, an area long associated with poverty, drugs, and crime. Milagro Centre, a new shopping center consisting entirely of restaurants, bars, a public market, a demonstration kitchen, an event center, and outdoor seating areas, opened two years ago in one of Sacramento's older outer suburbs and markets itself as "Carmichael's Gathering Place" (Milagro Centre 2018).

The opportunity to provide a "European" sidewalk café experience in Sacramento happened about the same time as the appearance of several now-iconic restaurants that are still on the scene today: Paragary's (1983), Biba (1986), and the Tower Café (1990). The city was also experiencing a major influx of refugees and immigrants from Asia, and Vietnamese, Chinese, and Thai restaurants multiplied and diversified in type and location. Choices in Mexican food did likewise. Cuisines less commonly encountered in Sacramento, such as Indonesian and Ethiopian, also appeared (Corn 2009). The offerings of immigrant entrepreneurs served the appetites not only of their own co-ethnics, but of an increasingly open-minded broader public seeking meals out multiple times a week. Growing numbers of restaurants, farmers' markets, community gardens, and local organic growers contributed to a new branding of Sacramento as the "Farm-to-Fork Capital" (Breton 2017).

While permitting restaurant sidewalk seating back in 1988 was a small gesture, it significantly enlivened public space and both increased and exhibited the enjoyment of eating out. It was an early push toward the Sacramento region's formation of impressive landscapes of food and drink preparation and consumption (Schmandt, Datel, and O'Sullivan 2012).

Event #26: A prolonged drought grips California, October 1, 2011–September 30, 2016

The authors of "Fifteen Events" decided against including any natural occurrences as triggers for human landscape change. However, strong evidence points to a mix of natural and anthropogenic causes of this drought, qualifying it as a human-caused event:

Persistent hot and dry weather led to five years of acute drought in California from 2011 through 2016, an event worsened by climate change. The fingerprint of climate change is seen in the rising temperatures and changing atmospheric patterns conducive to diminishing rains. The first link is firmly established, and there is a considerable and growing body of evidence supporting the second. Weather records tend to be broken when both natural and human-driven trends run in the same direction, in this case, towards warmer temperatures that are increasing California's drought risk. (Climate Signals 2017)

California experienced five years of high temperatures and low precipitation from October 2011 through September 2016. That period included the state's hottest (2014), second-hottest (2015), fifth-hottest (2012), and ninth-hottest (2013) years since records began in 1895 (Climate Signals 2018). The year 2014 marked the driest annum on record and 2015 the second driest. Paleoclimate research identified this drought as the most extreme in the past

1,200 years and emphasized that the sustained high temperatures were the main culprit (Griffith and Anchukaitis 2014). In May 2014, the drought conditions for all of California were classified by the US Drought Monitor as severe, extreme, or exceptional, the top three categories. This was a first for the state. The four counties of the Sacramento region were all in the area of extreme drought (Thompson 2014).

The drought's impact was visible on the landscape in several ways. In the Sierra Nevada portion of the metropolitan area, the most dramatic evidence was widespread stands of dead trees, 102 million of them in November 2016 (US Forest Service 2016). The hardest-hit parts of California were the central and southern Sierra, including Placer and El Dorado Counties. The drought seriously undermined the ability of pines and firs to fight off various endemic species of bark beetles, resulting in high tree mortality. Despite the creation and ongoing operation of a state Tree Mortality Task Force, the number of dead trees continues to increase (Tree Mortality Task Force 2018). The impacts of these dead trees, on the viewsheds of beauty spots such as Lake Tahoe and on the functioning of forest ecosystems and fire dynamics, will continue for the foreseeable future. Even before the drought, funding for improving forest health was inadequate, especially in the face of climate change, and it remains a major challenge.

In the urbanized areas of the Sacramento metro, perhaps the largest single visual impact was the very low water level of Folsom Lake. Dramatic scenes of exposed lakebed, parched and cracked in the heat, with pre-reservoir landscape artifacts occasionally exposed, became favorite newspaper images of the drought (Fagan 2015). Low flows on the American River were reminiscent of pre-Folsom Dam days when “in the hot Valley summer, . . . the river dwindled to a warm trickle” (Dillinger 1991, 3).

More-widespread evidence consisted of thousands of yards and other areas landscaped with turf lawns that were allowed to turn brown. The broad grass median of Sacramento’s Capitol Mall, the formal entrance to the city and the state Capitol district, went unwatered to comply with first voluntary and then mandatory water conservation orders. Many property owners during the drought and subsequent to it went well beyond letting their lawns become brown in the dry months. Numerous government agencies and volunteer organizations offered information and courses on how to kill a lawn and replace it with drought-tolerant landscaping. Some jurisdictions offered grants, rapidly exhausted, to property owners to remove turf and install smart watering systems (Seapy 2015).

Today, California cities and counties must have in place a Water Efficient Landscape Ordinance of their own or must use the model provided by the state. It tightly regulates water use on all new landscapes of 500 square feet or larger, applying to all residential, commercial, industrial, and institutional projects that require a permit, plan check, or design review (California Department of Water Resources 2015). Landscaped areas in the Sacramento region are being forced to evolve away from thirsty turf to alternatives that range from decomposed granite and bark to myriad types of drought-tolerant plants. Many new residential subdivisions and commercial properties are now entirely lawn-free (see Figure 12).



Figure 12.—Water-efficient landscapes dominate new housing developments of widely varied prices across the Sacramento region, including this one, Heritage at Del Paso Nuevo, in the generally low-income Del Paso Heights area of Sacramento. Recently installed, drought-tolerant landscaping dots older, established neighborhoods; those dots will become denser over time. (Author photo)

Finally, it is important to note that California’s big drought prompted initial steps toward regulation of California’s groundwater. The Sustainable Groundwater Management Act of 2014 set in train a long process to achieve sustainable groundwater usage by 2042. Reducing the use of groundwater, however, may lead to other problems, such as more economic pressure to export additional surface water from the Sacramento-San Joaquin Delta,

already facing major environmental degradation (Nelson 2016). Substantial reductions in groundwater use will require changes in agricultural technologies, crops grown and animals raised, and some abandonment of lands currently in production. While drier regions of the state will see more change, some of it will come to the Sacramento region. Will the region's move toward more permanent crops, such as grapes, almonds, and olives, which are only sustainable through drought periods by the use of groundwater, be reversed?

Two Sacramento Area Microcosms

Many places in the Sacramento region embody the legacies of the fifteen events written about by Dilsaver, Wyckoff, and Preston (2000) as well as the eleven discussed in this article. Many of the examples used here have come from the City of Sacramento, as it is the biggest and most complex place in the region, easily revealing the impacts of all twenty-five events somewhere in its territory. Described here, by way of conclusion, are two other, smaller places whose landscapes exhibit the same impacts in more compact spaces: the Folsom and Woodland areas.

Folsom. Now part of Sacramento's northeastern suburbs, the City of Folsom has about 77,000 residents, and its undeveloped foothills—covered in imported annual grasses from Eurasia and dotted with oak trees once used by Native Americans as food sources—are slated for more development and population in the years ahead. Mining camps sprouted on the American River shortly after gold was found in nearby Coloma in 1848. The land on which the town was developed was purchased from the estate of a Mexican land-grant recipient, William Leidsdorff, whose mixed Danish and Black Caribbean heritage presaged future immigrant diversity. In 1856, the town became the terminus of the first railroad in the West, the Sacramento Valley Railroad, designed by engineer Theodore Judah before his work on the transcontinental line.

The area has a long history of manipulating and managing American River water for mining, agricultural, and urban purposes. During the dredging phase of gold mining, tailings were deposited nearby and are still visible today. In 1895, a new use for the water of the American River was found by H. P. Livermore, who oversaw the building of a low dam and powerhouse (partly using the labor of nearby Folsom Prison inmates) that sent hydroelectricity twenty-two miles to downtown Sacramento; this was one of the world's pioneering long-distance electricity transmissions. Visitors to the Folsom Powerhouse State Park can experience this important landmark of engineering history. Sixty years later, the Central Valley Project's 340-foot-

high Folsom Dam was completed, providing a new scale of hydro power for the region, as well as a reservoir of water for urban, agricultural, and recreational uses and enhanced flood control for Sacramento. Visitors can also experience the upper end of the American River Parkway, a wildlife and recreation corridor unparalleled in any other western American city and a local version of our national parks (see event #7) (Save the American River Association 2017).

Additional features of today's Folsom that can be traced back to key events identified by Dilsaver, Wyckoff, and Preston or by this article include: historic Sutter Street (Folsom's "Main Street") improved and preserved in part by RDA financing, the Folsom Auto Mall, Folsom Lake Community College, Mercy Hospital of Folsom (part of Dignity Health), Intel's Folsom research and development facility, and Folsom Premium Outlets. Following US 50 eastward, one of those modern highways that follows aboriginal routes, a drive up to Lake Tahoe will reveal landscapes shaped by the several pieces of federal and state park, timber preserve, and environmental legislation identified by Dilsaver, Wyckoff, and Preston as well as the climate-change-related tree die-offs attributable to this article's event #26.

Woodland. Still separated from Sacramento and Davis by open space, Woodland retains some of its traditional character of county seat and agricultural service center (Datel, Dingemans, and Krabacher 2011). Yet, increasing numbers of its 59,000 residents commute to those cities from growing suburban developments, which fit into one-square-mile frames, courtesy of the US Public Land Survey. At the heart of the city is a Main Street-focused National Register historic district whose buildings are occupied mostly by local enterprises, including independently owned eateries with sidewalk seating. As you travel to the west, automobile-oriented neighborhood shopping centers and smaller commercial strips dot the landscape, offering a mix of local and chain enterprises. Some reveal the large Latina/o population of Woodland, many of whose families have come to the U.S. under the rules of the US Immigration Act of 1965. A southward turn on Cottonwood takes you to Woodland Hospital, at the heart of a healthcare cluster. Continuing westward on Main, you reach the end of town and enter orchards and fields of introduced species—almonds, tomatoes, wheat, and more. Nearby is the Cache Creek Nature Preserve, which displays and interprets impacts of Spanish and Anglo approaches to water usage and (gravel) mining, as well as Native American relationships with the creek. Continuing west to the Capay Valley in the Coast Range on Highway 16, you pass by the Yocha Dehe Wintun Nation's Cache Creek Casino Resort. The fruit and nut orchards and small

towns of the valley were creatures of the railroad (now gone) that arrived in the 1880s and water diversions from Cache Creek.

If, instead of traveling west on Main, you travel east, you will pass by the Sacramento area's sole remaining tomato cannery and Woodland's impressive warehousing district, many serving chain stores and online retailers. Along with the warehousing, only one of nine mobile-home factories that existed in 1974 remains. The city's big-box stores, such as Walmart, Home Depot, and Costco, are located on this side of town, as is Woodland Community College. Continuing eastward, Main Street becomes County Road 22, which runs parallel to I-5 as it crosses the Yolo Bypass, a major feature of the region's local, state, and federal water engineering.

Conclusion

Dilsaver, Wyckoff, and Preston (2000) noted that, over time, the California landscape bears the brunt of ever-more people, more powerful technology, and more demand for resources. This look at eleven additional events that have shaped the Sacramento landscape cannot take issue with that conclusion, especially given the mixed results to date of the region's "smart growth" plan, the Sacramento Regional Blueprint, which aimed to reduce the environmental impacts of growth (*Sacramento Bee* Editorial Board 2015). Still, the events noted in this article reveal more strongly the service orientation of today's economy and a greater emphasis on infrastructure that involves meeting social needs. Looking forward, we may wonder how California's and Sacramento's landscapes will be further transformed to meet their populations' social needs, such as affordable housing and a reformed immigration system, while managing the biggest human environmental impact of all time: global climate change. What will be the roles of local, state, national, and transnational forces, and of private versus public actors? Federal actions were key in many of the landscape-transforming events discussed in Dilsaver, Wyckoff, and Preston and in this article, but recently California has followed its own reform path in the areas of climate change, criminal justice, and immigration. While the state's commercial landscapes have converged with those of the rest of the U.S., it remains to be seen whether its actions in these other areas will bring significant divergence from other parts of the country. Or perhaps California is, as it has been in the past, the origin or early adopter of ideas that will diffuse elsewhere.

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Manager Perceptions of Goals and Outcomes of Public Rangeland Management in San Diego County

Kathleen A. Farley
San Diego State University

Abstract

Recognition of the conservation benefits of rangelands and other working landscapes has occurred alongside a trend of conversion to other uses. In many parts of California, such as San Diego County, one response has been the purchase of rangelands from private landowners by or for public agencies. However, the implications of these transfers for rangeland management, including the use of grazing, and for the types of ecosystem services prioritized and produced on rangelands, are not well known. Interviews with rangeland managers revealed four categories of management practices on public rangelands: (1) grazing plays a key role in management, (2) grazing is a new tool, (3) grazing is permitted but declining, (4) grazing is prohibited. Findings also highlight a shift in prioritization, from forage to other provisioning services and from cultural heritage to other cultural ecosystem services. This research outlines priorities among public rangeland managers that can guide future ecological research.

Keywords: *conservation; ecosystem services; land tenure; public land; rangeland*

Introduction

GLOBALLY, RANGELANDS ARE the dominant land cover, while they cover one-third of the land area in the United States and 50 percent of California (Silver, Ryals, and Eviner 2010; Reid, Fernandez-Gimenez, and Galvin 2014). They provide a wide range of ecosystem services (ES), including forage, carbon storage, water supply, and habitat for biodiversity, as well as recreation, aesthetic value, and other cultural ecosystem services (Booker et al. 2013; Cameron, Marty, and Holland 2014). However, rangelands are undergoing rapid change, prompted by cultural, technical, social, political, economic, and climate change. In particular, land-use change associated with the demand for rangeland ecosystem services has been cited as one of the predominant sources of change (Reid, Fernandez-Gimenez, and Galvin 2014).

One of the key factors influencing land use in rangelands is land tenure, which may be public, private, or mixed tenure. Globally, the most common tenure in rangelands is government ownership (Reid, Fernandez-Gimenez, and Galvin 2014). In the U.S., rangelands are approximately evenly split between public and private ownership, while in California more than 30 percent of rangelands are publicly owned (Wolf, Baldwin, and Barry 2017; Sayre et al. 2013; Sulak and Huntsinger 2007). However, land tenure is also undergoing rapid change in rangelands from Australia to Africa to the western U.S. (Reid, Fernandez-Gimenez, and Galvin 2014; Farley, Walsh, and Levine 2017). Reid et al. (2014) have noted that changes in rangeland tenure tend to follow four general patterns globally: expanded state ownership; partial privatization; privatization of common-use land; and maintenance and consolidation of private lands. Two of these patterns of changing rangeland tenure are dominant in North America: expansion of public rangelands and consolidation of private ownership (Reid, Fernandez-Gimenez, and Galvin 2014).

The type of tenure influences how rangelands are used and managed, and shifts in ownership are often accompanied by changes in the prioritization of ecosystem services, along with the management practices intended to provide priority ecosystem services. Since management that seeks to improve production of one ecosystem service can lead to reductions in other ES, these management changes often result in tradeoffs, which can be particularly complex when managing multiple uses for multiple ecosystem services (Wolf, Baldwin, and Barry 2017; Bennett, Peterson, and Gordon 2009). On private rangelands, provisioning ecosystem services, which include food, water, timber, and fiber (MEA 2005), often are prioritized, with an emphasis on forage production. At the same time, a range of other ecosystem services are also highly valued, including many cultural ecosystem services, such as recreational, spiritual, and aesthetic benefits (MEA 2005). However, as noted by Yahdjian et al. (2015, 47), “The relative importance of provisioning versus regulating and supporting services [from rangelands] has shifted in recent decades, as demand for recreation services increased.” These shifting priorities may be heightened where land tenure also changes. For example, in a shift from private to public rangelands, the priorities for management may shift from provisioning ecosystem services, such as forage production, to regulating or supporting services, such as water quantity or quality, or cultural ecosystem services, such as recreation (Yahdjian, Sala, and Havstad 2015; Cameron, Marty, and Holland 2014). However, while acquisition of private land is a common conservation strategy in California and elsewhere, the outcomes of this tenure change for ecosystem services often have not been evaluated (Bustic et al. 2017).

The role of grazing in enhancing or diminishing ecosystem service provision is a subject of continuing debate (Wolf, Baldwin, and Barry 2017; Sayre 2005). In California, grazing has been valued by some as a means of maintaining open space and has been found to be compatible with a number of ecological values (Wolf, Baldwin, and Barry 2017; Huntsinger and Sayre 2007). In some cases, government agencies and land trusts incorporate grazing into management for the purposes of fuel reduction, improving habitat, or promoting biodiversity (Wolf, Baldwin, and Barry 2017; Sulak and Huntsinger 2007). However, in the United States and Australia, where public rangelands are often leased for grazing, policies aimed at increasing protection of public rangelands often lead to a reduction in public land available for grazing (Reid, Fernandez-Gimenez, and Galvin 2014). This type of reduction in grazing also involves trade-offs, with values such as recreation and water quality prioritized over livestock production and any ecological benefits associated with grazing (Cameron, Marty, and Holland 2014). However, the question of which ecosystem services benefit from grazing and the degree to which grazing and the production of ES are compatible is an area where research remains limited, particularly for Southern California.

In San Diego County, rangelands are the dominant land cover, and the region is characterized by high biodiversity and a large number of endemic species (Figure 1). As in other parts of California, privately owned rangelands have been susceptible to conversion to other land covers (Alagona 2008; Wetzel et al. 2012). As such, private land purchases for conservation are common, and efforts to conserve land that has not yet been urbanized in San Diego County have led to private land acquisition by federal, state, and local governments as well as land trusts (Syphard et al. 2016; Bustic et al. 2017). Approximately 40 percent of the county consists of publicly owned rangelands, the area of which increased by 9 percent between 1990 and 2009 (Farley, Walsh, and Levine 2017). The area of publicly owned rangelands increased over this time period for all categories of public land, including federal, state, and county/city owned land, but state-owned rangeland increased the most—by 18,228 ha—while county/city-owned rangeland increased by 11,108 ha, constituting a 34 percent increase (Farley, Walsh, and Levine 2017). One factor influencing these changes was the implementation of the Multiple Species Conservation Program (MSCP), which was designed for landscape-level biodiversity conservation through public land acquisition that would allow for the establishment of interconnected habitat reserves. According to Greer (2004, 237), “Acquisition of habitat has occurred rapidly as a result of shared responsibilities and cooperation between local, state, and federal governments.” These shifts in rangeland tenure likely result in

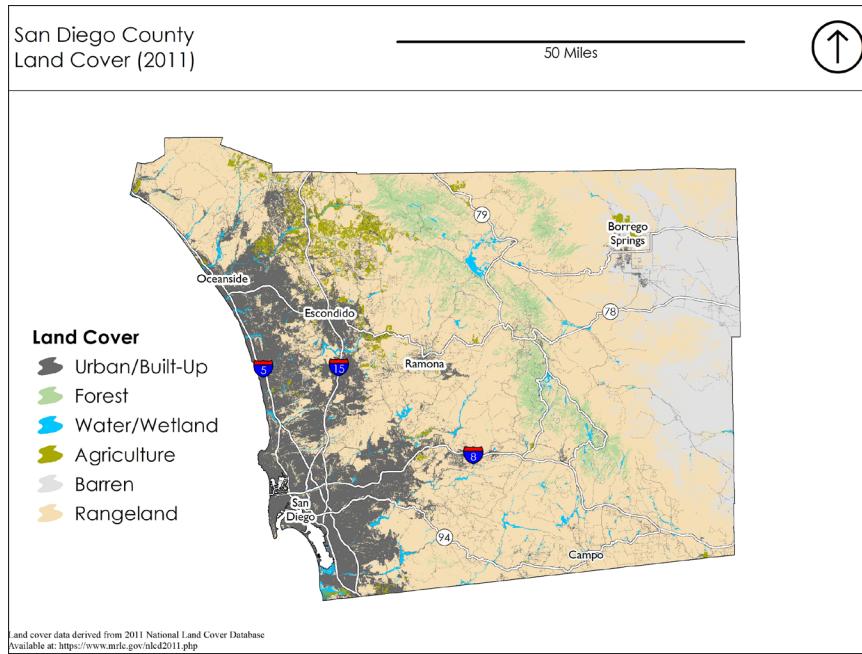


Figure 1.—Land cover in San Diego County.

changes in prioritization of ES and associated management practices, as public rangelands are often managed for different outcomes than private rangelands. However, while this shift in ownership has recently been documented in San Diego County, the implications for rangelands management remain unclear.

Given the changes in rangeland tenure in San Diego County since 1992 and the large percentage of rangelands under public ownership in the county, I sought to evaluate:

What are the primary management goals on public rangelands?

What is the role of grazing in relation to management objectives and what are the perceived outcomes of grazing on public rangelands?

Methods

I conducted semi-structured interviews with managers of public rangelands and structured interviews with ranchers in San Diego County. The interviews with managers of public rangelands included a variety of public land types, such as water districts, county land, state land, and military and other federal land. Interviews focused on the following themes: the primary uses of the land before and subsequent to public ownership; primary and

secondary objectives of management; management tools used (including grazing, mowing, or burning); effectiveness of management tools; and perceptions regarding differences between public and private rangeland management and outcomes of grazing. A total of eight interviews were conducted in-person, by phone, or by email, depending on the preference of each interviewee. I also conducted structured interviews with thirteen ranchers in San Diego County focused on participation in conservation programs and use of conservation practices, using a survey modified from Cheatum et al. (2011); many interviewees discussed use and management of public rangelands, and this information is included in this analysis (Farley, Walsh, and Levine 2017). These interviews included owners of private rangeland, some of whom had grazing leases on public and/or private land, as well as those who relied entirely on leased land. Interviews were in person, except for two that were by phone and one that was done by e-mail with a follow-up in person. Human subjects approval was obtained for this research from the Institutional Review Board at San Diego State University.

Results

Management Goals

Interviews revealed a range of goals and priority ecosystem services on public rangelands in San Diego County. These goals include providing habitat, in particular for special status species, recreation, protection of cultural resources, fire management, watershed management, and supporting local communities (Table 1). In many cases, public rangelands are being managed for multiple goals, but for many managers there was one priority goal. And, within each type of public ownership (City/County, State, Federal), there were different categories of public rangeland that were managed for different objectives (Table 1).

Table 1.—Management goals on public rangelands in San Diego County, including public rangeland with and without grazing.

Type of Public Ownership	Goals
City or County-level	Resource conservation, including habitat for special status species Recreation Watershed protection
State-level	Habitat for rare and sensitive species Foraging habitat for raptors Fire hazard reduction Sustain or restore ecosystem or habitat Recreation Protect cultural resources Mitigation
Federal-level	Fire management Habitat for threatened and endangered species Water management, improve watershed condition Rangeland health Forage production Support local/rural communities

The Role and Perceived Outcomes of Grazing

In terms of the role of grazing, the interviews with managers of public rangelands indicated that a wide range of practices are utilized on public rangelands. These can be grouped into four broad categories with respect to the role of grazing:

1. *Grazing plays a key role in management:* Grazing is used to meet a variety of objectives and is seen as either supporting or not in conflict with primary management goals.
2. *Grazing is a new tool:* Grazing is being newly introduced as a tool to manage the land.
3. *Grazing is permitted but declining:* Grazing is allowed in permitted areas but those areas are declining.
4. *Grazing is prohibited:* Grazing was removed when the land became public and is seen as being in conflict with primary management goals.

Grazing plays a key role in management or grazing is a new tool

In cases where grazing is integral to management, managers described it as producing a variety of outcomes related to habitat management, including

enhancing populations of rare plants and wildlife, increasing native species abundance, reducing weed populations, enhancing vernal pool communities, improving habitat for special status species, enhancing cover along riparian corridors for wildlife movement, and improving foraging habitat for raptors. In other cases, managers cited more general benefits of grazing for habitat management. One stated that “Managed grazing is seen as beneficial for native species and rare plants and wildlife, generally, as well as for specific special status species...and for invasive species and weed management.” Multiple managers cited the value of grazing for Stephens’ kangaroo rat, with one manager stating that they “thrive with grazing operations.” In one case where grazing was removed from an area for five years, the manager observed “a dramatic decline in Stephen’s kangaroo rat,” which had already been declining, but the removal of grazing was seen as worsening the trend.

In other cases where grazing plays a key role in management, fire management or water management are the primary objectives. In the one case where fire management was the primary objective, a five-year period during which there was no grazing provided an opportunity to observe the effects of removal of grazing. Without grazing, “areas where the exotic annuals were chest-high” were observed and “drove home...that the cows really do make a difference.” After grazing was reinstated and a large fire burned through the area, there was “a stark fence-line contrast where there had been cattle and the grasslands barely burned at all.” Further, the grazed areas were observed to respond very similarly to areas that had been mowed.

In all of the cases where grazing was considered integral to management, the lands have been grazed for decades and grazing is seen as an economically viable and effective management tool. It is also seen as a better alternative to options such as herbicide to control invasive species or mowing for fire management, which has a much higher cost. In some cases, the grazing lessee also maintains fence lines, providing an additional financial benefit as well as a presence on the land, which was seen by managers as valuable for monitoring large areas. Although the income from the lease was cited as important in some cases, one of the managers stated, “If we had it my way, we would not make money off of it. I’d rather pay people to do it and have the number [of cattle] I want, on and off when I want, instead of them paying us for the use of the land.”

Where grazing is a new tool, it was seen as one of several possible options for restoring habitat. In this case, the top management priority was rare and sensitive species, and a suite of raptor species were the main reason for

implementing grazing on the property. The manager noted that post-agricultural land in the area can provide important foraging habitat for raptors, but when the grasses are tall and thick, foraging is impeded. At the same time, grazing is used to control invasive species in order to help restore native grasses. In particular, the manager noted that cattle can remove invasive wild oat (*Avena fatua*), allowing native purple needle grass (*Stipa pulchra*) to grow. A secondary priority on this property is fire management, with fire being a “major focus” for the surrounding communities. Several of these perceptions were shared by the ranchers interviewed, who frequently noted that grazed areas can be much healthier than ungrazed areas and noted the benefits of grazing for eradication of some invasive species, such as mustard and several types of thistle, reduction of fire hazard, and compatibility with (if not necessarily benefits for) water production.

One manager implementing grazing as a new tool stated that “We already know that if we leave the land alone it’s not going to heal on its own,” and that “controlling vegetation conditions is key” in managing invasive species. While multiple tools are seen as necessary, weeding and mowing are considered either infeasible or too expensive, so that “fire, chemicals, and grazing are what’s left in the toolbox.” Before grazing was an option on this land, controlled burns were used and the manager noted that “Fire is fast and efficient, but grazing provides slow and methodical change in vegetation conditions on the landscape.” At the same time, for some species, the intensity of prescribed burns can be too high and cattle are seen as doing a better job of increasing the quality of the habitat. This manager also noted that grazing may be more effective and more viable in some locations than in others, and that effects on a suite of species will need to be evaluated as it is implemented in order to better understand the range of outcomes associated with grazing.

Grazing is permitted but declining or grazing is prohibited

Where grazing is declining, it has historically been seen as one of several appropriate land uses that are historic in those areas and are seen as providing benefits to local communities. Here, the perceived outcomes relate primarily to providing “goods and services” to local communities. Whereas managers in the first two categories viewed managed grazing as a way to produce specific ecological outcomes, managers in this category tended to focus on potential tradeoffs between grazing and ecological outcomes and ways to mitigate or avoid those tradeoffs. This has resulted in a decline in areas permitted for grazing in response to concerns about its potential negative ecological effects, in particular effects on the habitat of some species

of concern. In areas with threatened or endangered species, the removal of grazing can be seen as the least risky approach where there are limited data on the effects of grazing on those species. This has then been reinforced by a broader lack of institutional incentives to maintain grazing on these lands. In contrast to the first two groups, where grazing is seen as providing a financial benefit, in these cases it is seen as creating a financial loss. One manager noted that, in spite of this, the value of allowing grazing is in supporting ranching families who have “...been doing that for generations, to support that community and culture.”

Finally, where long-term prohibition on grazing has been maintained, grazing is viewed as an activity carried out for economic benefit and, as such, is prohibited along with other commercial uses of the land. On these lands, the goal has been to “recreate and sustain something as close in proximity as possible to natural” and “since cows weren’t a native species, the only time it makes sense is when the native ungulate has been removed and that animal had an important role to play.” In this sense, restoration or maintenance of ecological processes is seen as the priority for these public rangelands and grazing is seen as contradictory to that goal. Further, one manager noted that the fire management benefits of grazing were seen as minimal for the area being managed—and less effective than prescribed burning. At the same time, grazing for fire management was seen as potentially having negative ecological impacts, such as on oak regeneration.

Discussion

Prioritization of Ecosystem Services

This analysis illustrates that the demand for ecosystem services produced on public rangelands includes provisioning ecosystem services (water); regulating services (regulation of fire hazard; water regulation); and cultural ecosystem services (including recreation and cultural heritage values). In addition, there is emphasis on management of invasive species, which are a driver of changes in biodiversity and influence both regulating and provisioning ecosystem services (MEA 2005). In some cases, there is overlap with the demand for ES from private rangelands, such as in the regulation of fire hazard, which is also prioritized by ranchers (Farley, Walsh, and Levine 2017). In other cases, there is a shift in demand from provisioning to regulating or supporting services, reflecting broader trends in rangeland management (Yahdjian, Sala, and Havstad 2015). In general, regulating and cultural services (primarily recreation) were in higher demand from public rangelands than provisioning services. Where provisioning services

were considered a top priority, the focus was on water rather than forage, although forage provision was a secondary goal for some public rangeland managers. And, where cultural ecosystem services were prioritized, the focus was on recreation, with less emphasis on cultural heritage. In addition, public rangelands were associated with a higher demand for ES related to habitat and biodiversity conservation.

Rangeland tenure also affects which stakeholders are involved in management decisions, with public rangeland generally including a wider variety of stakeholders. This influences which ES are prioritized in management and the management tools used, as “Stakeholders vary in both their demand for and valuation of different ecosystem services” (Yahdjian, Sala, and Havstad 2015, 44). For example, the demand for recreation on public rangelands continues to grow, reflected in an increase in the number of users and number of days of use of public lands in California (Wolf, Baldwin, and Barry 2017). Although some private rangeland managers also reported opening their properties to recreationists, the number of people is very small relative to public rangeland and they are permitted access at the discretion of the owners, who maintain authority over management decisions. Regulation of fire hazard is also an ES that can involve a wide variety of stakeholders who advocate for particular management strategies. For example, grazing is used by many private rangeland owners to mitigate fire danger. On public rangeland, agency perspectives, public opinion, and the views of fire departments or others focused on management of fire risks all influence which management strategies are chosen and whether grazing is one of the tools used (Wolf, Baldwin, and Barry 2017).

Perceived Effects of Grazing on Ecosystem Services

Sayre (2005) noted more than a decade ago about rangelands in the southwestern U.S. that “There is a pronounced shortage of predictive scientific knowledge about the effects of fire and livestock grazing on threatened and endangered species.” This remains largely the case for many parts of the western U.S., as data on outcomes of different management practices on rangelands are very limited, especially for San Diego County. However, interviews revealed a variety of ways that grazing is being used on public lands to produce specific outcomes, and they highlighted a wide range of perceptions of the effects of grazing on ecosystem services. While the purpose of this research is not to measure outcomes of grazing on ES, it serves to outline some of the goals for which grazing is being used and it highlights research needs. Future research that combines the information presented here on the ecosystem services that are prioritized in management

with measurements or modeling of the outcomes of grazing management for those ecosystem services would be extremely beneficial. For example, Bustic et al. (2017) evaluated the effect of land protection resulting from the purchase of private land in Sonoma County and found that four ecosystem services, including carbon storage, sediment retention, nutrient retention, and water yield, were high on the protected public land. This type of quantification of ES would be a valuable area for future research in San Diego County, particularly if it included not only the effect of vegetation type but also vegetation management.

In addition to better understanding outcomes, information on tradeoffs among outcomes is needed. The degree to which there are tradeoffs among priority ES on California rangelands has been evaluated in only a few studies. For example, Syphard et al. (2016, 1) note that “fire risk reduction and biodiversity conservation are often viewed as competing objectives.” They suggest that these objectives can be compatible under some circumstances, but state that management that includes fuels reduction in nonforested ecosystems “often results in negative ecological impacts” and “will likely continue to be in conflict.” In contrast, Wolf et al. (2017, 193), suggest that “grazing could have substantial benefits for wildfire risk reduction, recreational enhancement, and floral and faunal composition of rangelands” in California. In the case of floral and faunal composition, this is supported by research in some parts of California (e.g., Marty 2005; Hayes and Holl 2003). However, site-specific research in Southern California that identifies where priority ES can be met and where tradeoffs exist would be valuable to guide managers in the categories where grazing is a new tool as well as those where grazing is permitted but declining. This type of research also has the potential to support tools for permitting grazing on public lands, such as grassbanks, where “forage is exchanged for one or more tangible conservation benefits.” Under these agreements, “producing conservation is the primary objective” but benefits are also provided to ranchers who participate (White and Conley 2007, 27, 29). The public lands in this study that are providing access to forage in exchange for fire management or invasive species management provide models on which grassbanks could be developed that are suitable to the San Diego County context.

Conclusion

As the number of stakeholders involved in rangeland management increases under public management, the need to better understand the outcomes of management actions, including grazing, also increases. Land is often conserved through public acquisition with the goal of protecting and enhancing

ecosystem services, but there are few studies that measure whether this goal is being met (Bustic et al. 2017). At the same time, management options are in some cases employed or rejected based on perceptions of whether they will improve or degrade ecosystem services, although quantification of those outcomes is generally lacking. Farmer et al. (2017, 63) note that research on private land conservation has tended to focus on recruitment and retention of participants, but more information is needed on the outcomes following enrollment of land in conservation programs. Such information is also needed on lands that have been conserved through purchase by or for public agencies.

In order to better understand the value of public land acquisition, there is a need for clear delineation of management objectives under public ownership and better information on the outcomes of management actions. This research highlights the range of management objectives as well as the perceived role of grazing in meeting those objectives. Further research is needed to better understand the outcomes of management changes associated with conversion from private to public ownership. Studies that have evaluated provision of ecosystem services with and without conservation as a way to assess the value of land acquisition provide valuable guidance for future research on San Diego rangelands (Kovacs et al. 2013; Bustic et al. 2017). Bustic et al. (2017, 88) note that for quantification of ecosystem services under different ownership or management to be useful, researchers “must be sure that the ecosystem services evaluated fit the priorities of the communities in question.” This research outlines the priorities among public rangeland managers in San Diego County that can guide future research for the region.

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The Origins and Spatial Diffusion of Female Professional Soccer Players in the United States, 1991–2015: Geographical and Sociocultural Perspectives

Etem Bairam
California State University, Long Beach

Abstract

In the latter half of the twentieth century and especially in the last twenty-five years, soccer has grown exponentially in the United States. In particular, the women's game has exploded with interest all around the country. Studies on the origins of professional athletes from a geographic perspective are relatively isolated and demonstrate a tendency to favor males in American professional sports. This study contributes to filling this identified gender gap in geographic sports studies. Results reveal that the origins of most female professional soccer players can be connected to suburbanized middle- to upper-middle-class communities close to major cities, mainly in coastal regions. From a per capita perspective, the results also show that states in the West produce more players than states in the East. Sociocultural perspectives explain these patterns, supporting a common assumption that most female professional soccer players in the United States are white and come from areas of relative affluence. In addition, the findings from this study show a distinct contrast between the origins of professional male athletes and female soccer players.

Introduction

SINCE THE EARLY TWENTIETH CENTURY, football, or “soccer” as it’s popularly known in the United States, has grown and established itself as the leading and most popular sport in the world (Rooney 1974; Bale 1989; Goldblatt 2006; Wangerin 2008). From 1930, when the inaugural Fédération Internationale de Football Association (FIFA) Men’s World Cup was hosted in Uruguay, the tournament (which is held every four years) has become the largest global sporting event (Goldblatt 2006; Springer 2010). From a geographic perspective, the FIFA World Cup has acted as a catalyst for the global diffusion of soccer, which has now gained the official membership of more than 200 states from FIFA, the world’s governing body of soccer.

In 1991, the first major international women's soccer tournament was established by FIFA when China hosted the inaugural FIFA Women's World Cup. The United States won this tournament. This came as a surprise to the soccer world because of the U.S.'s long history of little or scarce following or consumption of the sport, both in the mainstream media and in public opinion. At that time, the U.S. was without any recognized professional soccer leagues, the mainstream sports community did not consider soccer as one of the most popular national sports, and the men's national team had failed to qualify for the World Cup for over four decades. So with all of these obstacles, how did this country manage to produce a winning team for the inaugural FIFA Women's World Cup? And where did these world-class athletes come from?

In 2015, the United States women's national soccer team won its third World Cup tournament, making their country the most successful in the history of women's soccer. This has significantly shaped the landscape of women's soccer in the U.S. Since these achievements within the past twenty-five years, the diffusion of women's soccer has extended to most states and has now established itself in the mainstream of United States sports. In countless communities, millions of young women now play the sport and aspire to follow in the footsteps of the great heroines from the national team (Coombs 2014). This will ultimately result in female professional soccer players being produced from all over the country. But in which areas did this diffusion begin? And is it continuing today?

This research is positioned at the crossroads of two areas of study: sports geography and sociocultural perspectives on soccer in the U.S. Previous studies have indicated that the top elite male athletes from westernized countries originate from regions of lesser affluence, lower social classes, and multi-ethnic backgrounds (Rooney 1974; Bale 1983; Woodcock and Burke 2013). To this date, no such studies exist on the geographic origins of professional female athletes. In summation, studies on soccer from a geographic perspective have been relatively isolated and have demonstrated a tendency to favor male professional athletes. These studies are relatively dated, and, since their publication, there have been significant changes in society and culture involving women in sports. This provides significant potential for further research.

Multiple studies from the field of social-cultural perspectives on soccer in the United States have made it clear that soccer has been lagging in the United States sports mainstream when compared to sports like the big three-and-

a-half: American football, basketball, baseball, and ice hockey (Foer 2006; Wangerin 2008; Seese 2014). These studies suggest that outside of minimal participation in school physical education, soccer was not adopted in the U.S. during times of global diffusion, which took place during the industrial revolution. Instead, the sport was marginalized by being culturally defined as "un-American" or a sport for immigrants (Keyes 2014). Through this marginalization, there have been studies that suggest that many of America's youth, including females, adopted this sport as part of their culture and even without the support of the traditional American sports community; thus American youth did manage to maintain soccer as part of their culture from the late 1960s until the present (Foer 2004; Wangerin 2008; Seese 2014; Keyes 2014; Duerr 2014; Dettmar 2014).

The common trend that exists is that this marginalization is what has enabled women to have a presence in soccer. Markovits and Hellerman (2001) illustrate this point when explaining that soccer is a space of exceptionalism. They argue that women would never have had the opportunity to break into the baseball or American football markets, just as women have struggled to break into the male-dominated soccer markets in Europe and/or Latin America.

These studies support a hypothesis that these professional female athletes originate from middle-class suburbs, contrasting with the origins of professional male athletes. As the sport of soccer rapidly establishes itself as part of the American cultural and national identity, this research is committed to reveal how female professional soccer players have contributed to this landscape. It is therefore the intent of this study to identify the areas of origin and spatial diffusion of women's professional soccer players in the United States. Using secondary quantitative data and GIS, this research will represent the origins of these athletes over a period of twenty-five years, from 1991 (the year of the first FIFA Women's World Cup) to 2015 (the year of the latest FIFA Women's World Cup). Using five-year intervals, the goal is to reveal geographical patterns in this diffusion and, following Bale's (1989) "S-Curve Theory," to check for the clustering of these areas. The research will seek explanations for these patterns and will test the common assumptions that female professional soccer players in the United States are white and come from the middle to upper classes and areas of affluence (Foer 2004; Dettmar 2014).

Methodology

The methodology of this research employs quantitative data collection by means of analysis and visualization, as well as a more qualitative approach, through interpretation and explanation of the quantitative results.

Quantitative Data Collection and Analysis

Following Rooney (1974) and Bale (1983), who both obtained quantitative data through athletic team rosters in their respective studies, this study replicated the same method by acquiring United States professional women's team rosters, or league draft archives, and extracting for each player the hometown information plus the year she made her professional debut. For the purpose of this study, athletes with hometown information outside the United States are excluded, as this information is irrelevant to this research. Additionally, this research project follows the guideline of recording the information of where an athlete "grew up" (or attended high school) as opposed to her birthplace, because most athletes are shown to develop their skills during their teen years (Woodcock and Burke 2013).

The data collected fell between 1991 and 2015. Because no recognized professional women's leagues existed between 1991 and 2000, this study assumed that every player who represented the United States national team at major tournaments during this period was considered a professional-level player. The rationale to support this assumption is that the national team was amongst the World Cup finalists in 1991 and 1999, winning both tournaments and also placing third in the 1995 tournament. Additionally, the team also won the Gold and Silver medals at the 1996 and 2000 Olympics, respectively. In addition to game records, the list of most of the players who have represented the national team at major tournaments is available online through the FIFA World Cup Archive.

In the history of United States sports, there have been three different attempts to form women's professional leagues: the Women's United Soccer Association (WUSA), 2001–2003; the Women's Professional Soccer (WPS), 2009–2011; and the National Women's Soccer League (NWSL), 2013–present. Draft history, which reveals the debut year for each player, and rosters for all the teams are available online and contain the hometown information for most players. The names of the athletes that debuted during the first two attempted leagues (WUSA and WPS) were easily obtained; however, almost 30 percent of these players' hometowns were not. This was because some of these professional rosters would list the college that the players graduated from instead of their hometown. To include the college an athlete graduated

from (versus the desired hometown) into the data collection would have led to inaccurate results. Overcoming this obstacle required manual searches on each individual player through her online college roster to discover this missing hometown information.

A spreadsheet was the primary tool to record the data (see Table 1). As shown in the table below, the following information was recorded: "Player Name," "Debut Year," "Club," "Town/City," "County," "State," "Latitude," and "Longitude."

Table 1.—Example of Data Collection.

Player	Debut	Name	Year	Club	City/Town	County	State	Latitude	Longitude
Player A	1991		USA		Rancho Palos Verdes	Los Angeles	CA	33.744461	-118.387017
Player B	1991		USA		Mission Viejo	Orange	CA	33.600023	-117.671995
Player C	1991		USA		Huntington Beach	Orange	CA	33.660297	-117.999227

Following the same methodology as in Rooney (1974), hometown origins are divided into two categories: states and counties. GIS mapping software was the primary tool to represent the results of the data collection. The data are divided into five groups using equal intervals: 1991 to 1995, 1996 to 2000, 2001 to 2005, 2006 to 2010, and 2011 to 2015. A total representation of the entire study period is also included in the results section. By obtaining the year of the professional debut, each athlete can be placed into one of the five-year interval groups. The purpose of the interval groups is to reveal any changes or diffusion patterns of player origins during the study period. The GIS mapping software visualized these findings by generating maps that show the soccer-player production level of each state and county. It must be noted that no players are duplicated in any of the intervals.

Rooney (1974) and Bale (1983) discuss two types of representation in athlete production in a spatial sense: "pure production" and "production per capita." "Pure production" is simply the quantity of players produced in a specific area. For example, the state of California produced forty-four players during the 2001 to 2005 interval. "Per capita production" is slightly more complex and requires population census data and a mathematical calculation to express the result. One must divide the number of players produced (either by county or state during an interval) by the population number of that specific county or state. Rooney (1974) and Bale (1983) both took this

to the next level and offered “per capita index values” to represent the “per capita production.”

“Per capita index value” can be found using this formula: $I = \frac{N}{P} \div n$

Here I is the per capita index value of player production, N is the number of the players produced in a given area, P is the population of the area, and n is the number of players per capita produced in the country as a whole. Bale writes:

The national per capita level of production is represented by an index of 1:00. A region or county with an index of 2:00 would be producing professional footballers at twice the national per capita norm, while one with an index of 0.5 would be producing at only half the national per capita level. (Bale 1983, 142)

Rooney (1974) and Bale (1983) both argue that “production per capita” provides a more accurate assessment for an area when it comes to the production of athletes. “Pure production” is still a necessity when analyzing the findings, which is discussed in the analysis section of this study. In this study, the “per capita index value” for all athlete producing states and counties was calculated.

Obtaining U.S. Census data from the 1990, 2000, and 2010 Censuses and an estimation for 2015 allowed the ranking of “production per capita” for all five intervals. In addition, calculating the population average between 1991 and 2015 also shows “per capita production” for the entire twenty-five-year study period. This was crucial when revealing the true hotbeds of professional female soccer talent in the United States.

According to Woodcock and Burke (2013), it is important to recognize that the birthplace and the area where an athlete developed skills can be different. For example, it is possible for a player to be born in Albany, New York, but at the age of fourteen relocate to Dallas, Texas, thus changing the defined hometown for that particular player. If the secondary data in an athlete’s record show only the birthplace, then this may result in some inaccuracies and inconsistencies.

As previously stated, there was a strong chance that not all player records would be available. If an athlete’s hometown information is not available, it cannot be included in the analysis of results. Fortunately, because of this, only five professional players out of 530 could not be included in this research.

A final issue is the absence of those American professional players who have never played in the United States. It is not realistic to search the rosters of every professional team in the world, and those athletes are also not included into this study.

Qualitative Interpretation and Explanation

It is during this phase that the areas of professional player production will be identified. The statistics from the “pure production” and “per capita production” will allow a fair representation of the areas of the most talent during the study period. Census data, such as on population growth, median ages, household income, and ethnicity, are used in an attempt to answer the research questions, in particular, at the county level. It is not feasible to investigate the demographic information of every single county. Therefore, for the purpose of this study, the top eleven player-producing counties revealed during the data representation phase are examined to the greatest extent. Several of the least producing areas are also examined to provide some comparison.

Findings

Production of Players 1991 to 2015 at State Level

Interval 1: 1991–1995

Table 2 (below) shows that California produced the most players during the 1991-to-1995 interval, with nine in total. Washington also produced a greater number of players in comparison to other states. Four players from Washington were produced during this period; although this is less than half the total number from California, they produced the highest per capita ranking, with an index value of 6.85, which is almost seven times more than the national average (Table 2).

Table 2.—Interval 1: Professional Player Production by State (1991 to 1995).

Rank	State	Pure Production of Players	State Per Capita Index Value
1	California	9	2.61
2	Washington	4	6.85
3	Minnesota	2	3.96
4	Virginia	2	2.78
5	Texas	2	0.97
6	Oregon	1	2.94
7	Connecticut	1	2.75
8	Colorado	1	2.43
9	Maryland	1	1.83
10	Massachusetts	1	1.49
11	Georgia	1	1.26
12	New Jersey	1	1.14
13	Illinois	1	0.77

The findings from this interval suggest that most of the players are located on both East and West Coasts, with the West Coast demonstrating the strongest per capita production. In total, thirteen states produced at least one player, yielding twenty-seven players in total during the 1991-to-1995 interval. This suggests that the leading areas of origin for female professional players would be the states of California and Washington (Table 2 and Figure 1).

Interval 2: 1996–2000

The 1996-to-2000 period is characterized by declining numbers: a total of only fifteen players were produced, and there is a similar geographic pattern to the first interval, with the most players coming from coastal regions (Table 3). Again, California dominates by producing six times the total number of players from the nearest state, with a total of six. All other states did not produce more than one player. Washington, being one of these states, continues to maintain consistency with a high-ranking per capita index value. The continuing line of production of players from California indicates a clustering pattern.

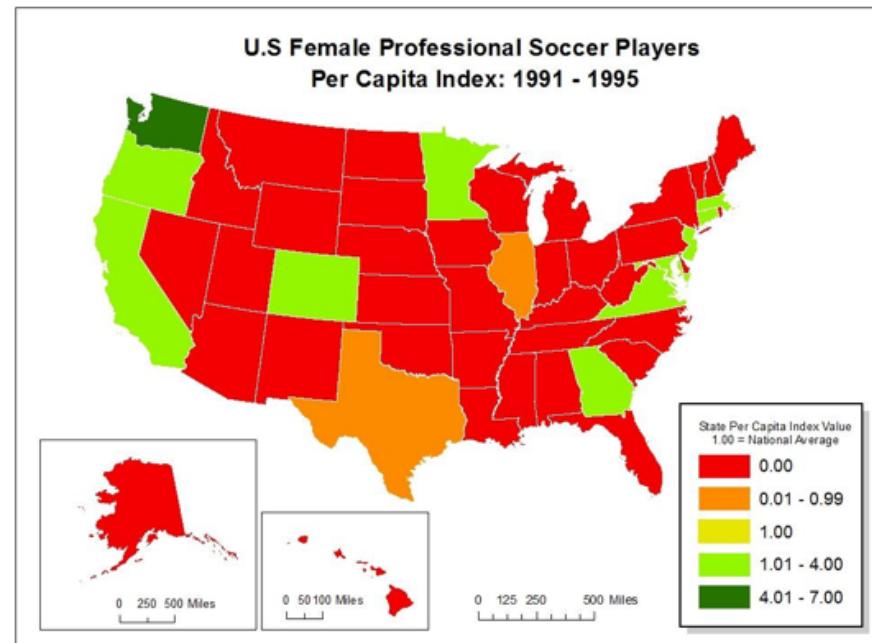


Figure 1.—Interval 1: Professional players per capita index map (1991 to 1995).

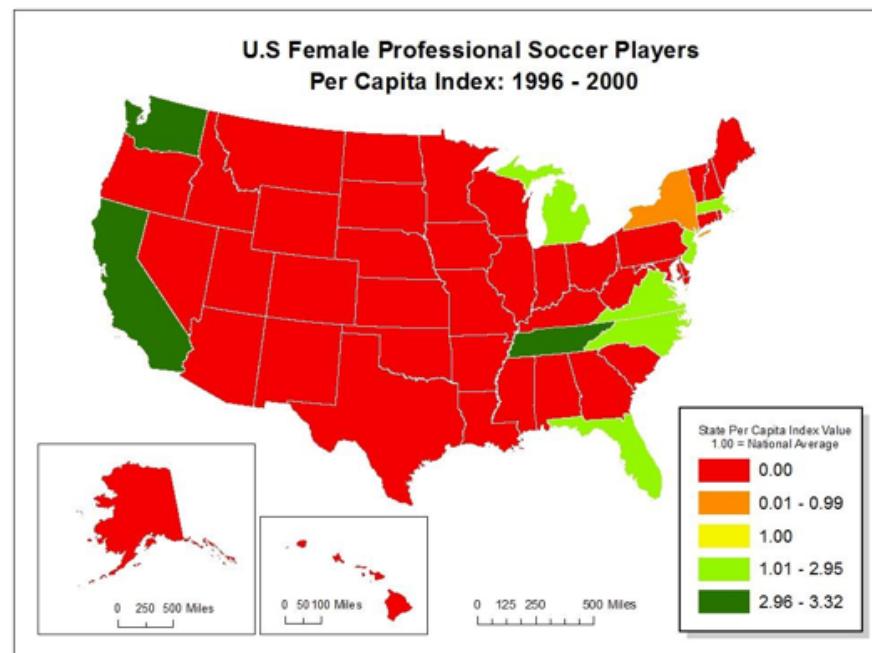


Figure 2.—Interval 2: Professional players per capita index map (1996 to 2000).

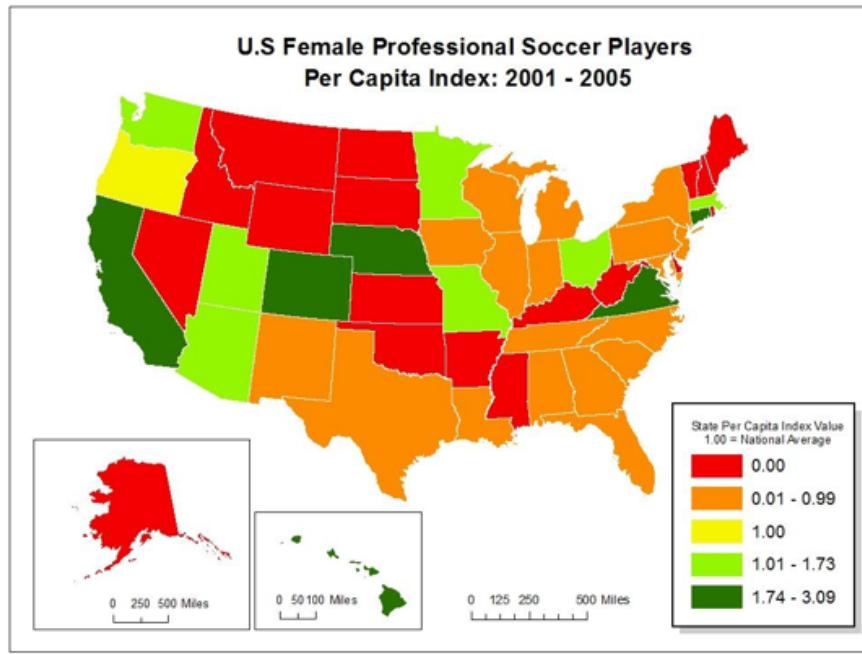


Figure 3.—Interval 3: Professional players per capita index map (2001 to 2005).

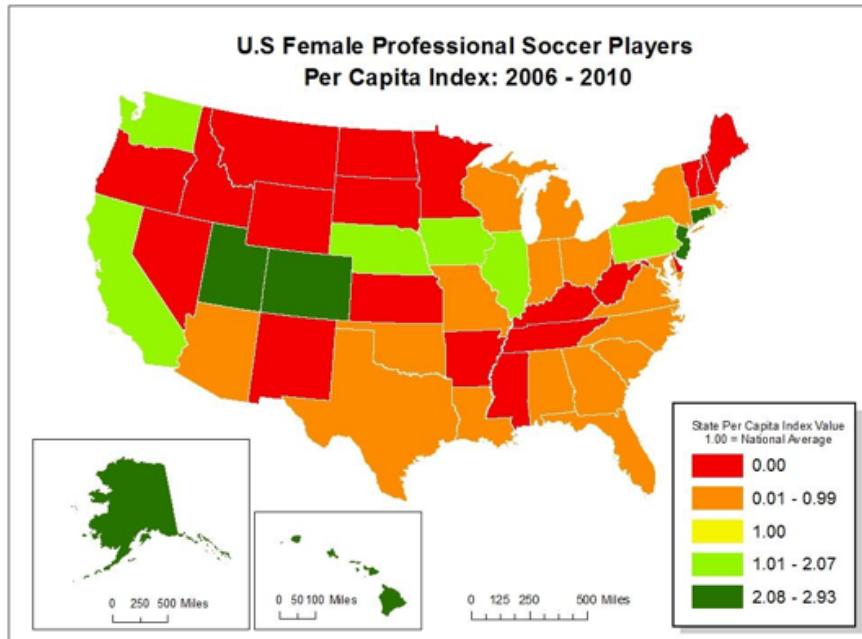


Figure 4.—Interval 4: Professional players per capita index map (2006 to 2010).

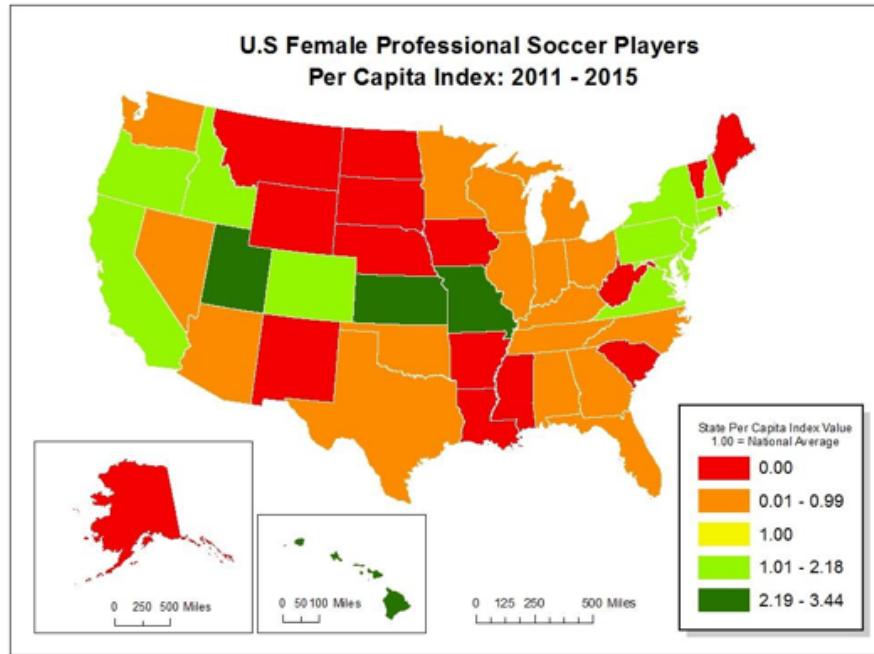


Figure 5.—Interval 5: Professional players per capita index map (2011 to 2015).

Table 3.—Interval 2: Professional Player Production by State (1996 to 2000).

Rank	State	Pure Production of Players	State Per Capita Index Value
1	California	6	3.32
2	Washington	1	3.18
3	Virginia	1	2.65
4	New Jersey	1	2.23
5	Massachusetts	1	2.95
6	New York	1	0.99
7	Florida	1	1.17
8	North Carolina	1	2.33
9	Michigan	1	1.89
10	Tennessee	1	3.30

There is a sign of diffusion with player production from Virginia into Tennessee to the west and North Carolina into the south (Figure 2). Diffusion is also seen from New Jersey and Massachusetts into New York. As previously stated in the methodology, due to the nonexistence of professional leagues

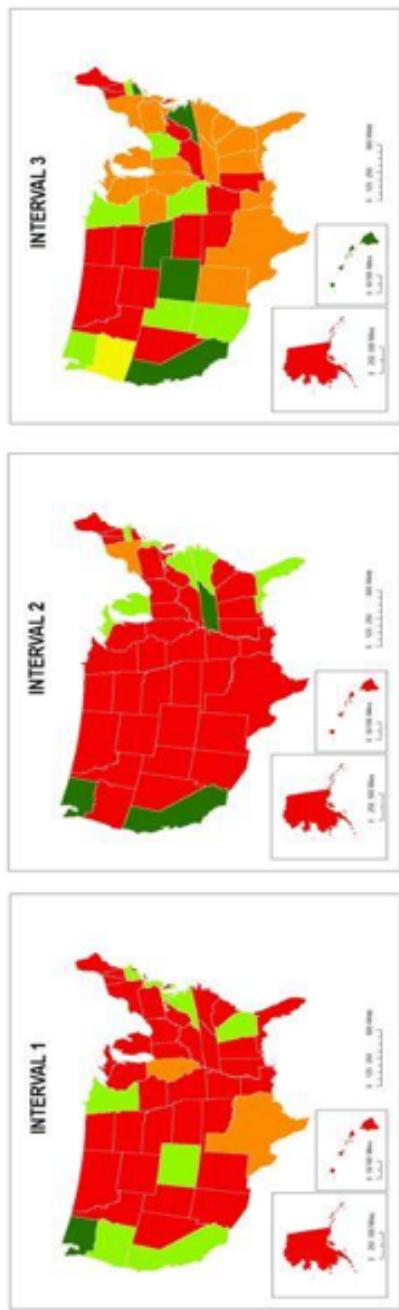


Figure 6.—Diffusion map of professional player production (1991 to 2015).

between 1991 and 2000, these are the players who represented the national team during the 1991, 1995, and 1999 FIFA Women's World Cups, and the 1996 and 2000 Olympic Games. In total, forty-two players were considered professional-level players during this ten-year period.

Interval 3: 2001 to 2005

Results from the 2001-to-2005 interval (Table 4) show an exponential increase, with a total of 162 players. The creation of the first-ever women's professional soccer league explains this growth, with fourteen states showing production for the first time. This significant change in the sport was not only the reason for the increase in players, but also the catalyst for their diffusion from the East and West Coasts, to the interior of the country (Figures 3 and 6). These diffusion patterns are consistent with Bale's (1989) hierarchical innovation diffusion theory.

Following the trend from the previous two intervals, California leads the way with a total of forty-four players, which is four times the number of players from Texas, which holds the second-place slot with eleven players. Table 4 shows all of the states (thirty-two in total) that produced one or more players during this interval. Texas, New York, and Florida (all ranked among the top five for "pure production") are actually producing lower than the national per capita index value of 1.00 (Table 4).

Colorado and Connecticut are the highest per capita producing states in the top ten (scoring 2.71 and 2.62, respectively). Not ranked highly in pure production, Nebraska (3.09) and Hawaii (2.89) both scored highly on the per capita index (which also were the highest-ranking per capita scores). With the exception of Nebraska, all of the states in the Midwest region did not score highly with their respective per capita index scores (Table 4 and Figure 3).

Similar results for this period are seen in the South. A common trend is that every state scored under 1.00 in the per capita index values, meaning that the entire region was producing below the national average (Figure 3).

Table 4.—Interval 3: Professional Player Production by State (2001 to 2005).

Rank	State	Pure Production of Players	State Per Capita Index Value
1	California	44	2.23
2	Texas	11	0.87
3	New York	10	0.95
4	Virginia	9	2.18
5	Florida	8	0.84
6	Colorado	7	2.71
7	Ohio	7	1.11
8	Washington	6	1.73
9	Massachusetts	6	1.69
10	Connecticut	5	2.62
11	Arizona	5	1.54
12	Pennsylvania	5	0.73
13	Missouri	4	1.26
14	North Carolina	3	0.62
15	Minnesota	3	1.07
16	Nebraska	3	3.09
17	Indiana	3	0.87
18	New Jersey	2	0.42
19	Michigan	2	0.36
20	Illinois	2	0.29
21	Oregon	2	1.00
22	Georgia	2	0.40
23	Utah	2	1.44
24	Hawaii	2	2.89
25	South Carolina	2	0.84
26	Tennessee	1	0.30
27	Maryland	1	0.33
28	Alabama	1	0.40
29	Wisconsin	1	0.33
30	Iowa	1	0.61
31	New Mexico	1	0.93
32	Louisiana	1	0.41

In contrast to both the Midwest and the South, the West shows greater per capita index (Table 4 and Figure 3). With the exception of New Mexico (0.93, just below the national average), each player-producing state scored at least 1.00 or greater. In the East (along with the previously mentioned Connecticut), Massachusetts and Virginia are the highest performing states (Table 4 and Figure 3). These findings indicate that the East and West regions of the country are better producers of female professional soccer players than the Midwest and the South.

Interval 4: 2006 to 2010

The fourth interval, between the years of 2006 to 2010 (Table 5), shows a spike in production from the states of Illinois and New Jersey, with a total of thirteen and eleven players, respectively; both produced only two players in the previous interval. California, Colorado, Connecticut, Texas, New York, and Washington all appear in the top ten of pure production for a second successive interval, yielding similar results in both pure production and per capita production. Most other states also show either a slight increase or decrease of one or two players. There is a notable decrease in production of three players or more from Florida, Massachusetts, Minnesota, Ohio, and Virginia. There is also first-time production from Alaska, Oklahoma, and Rhode Island, taking player production diffusion from thirty-two states up to thirty-five. Colorado, Hawaii, and New Jersey are the top three in per capita production, while Connecticut appears in the top five for the third time in the past four intervals. One hundred sixty-five players in total were produced during 2006–2010, making this the highest-producing interval (Table 5).

Observations of the map from this period do not show any notable changes from the third interval (Figure 4). The West and East regions continue to show higher areas of per capita production, with the Midwest still inconsistent and the South remaining the lowest.

Table 5.—Interval 4: Professional Player Production by State (2006 to 2010).

Rank	State	Pure Production of Players	State Per Capita Index Value
1	California	42	2.07
2	New Jersey	13	2.76
3	Illinois	11	1.57
4	Texas	10	0.74
5	New York	10	0.96
6	Colorado	8	2.93
7	Pennsylvania	7	1.04
8	Washington	6	1.66
9	Florida	5	0.49
10	Connecticut	5	2.65
11	Virginia	4	0.94
12	Georgia	4	0.75
13	Utah	4	2.63
14	Ohio	3	0.48
15	Massachusetts	3	0.86
16	Arizona	3	0.83
17	Missouri	3	0.94
18	North Carolina	3	0.59
19	Maryland	3	0.98
20	Wisconsin	3	0.98
21	Indiana	2	0.58
22	Hawaii	2	2.86
23	Alabama	2	0.79
24	Iowa	2	1.22
25	Nebraska	1	1.03
26	Michigan	1	0.19
27	South Carolina	1	0.40
28	Louisiana	1	0.42
29	Alaska	1	2.69
30	Rhode Island	1	1.77
31	Oklahoma	1	0.50

Interval 5: 2011 to 2015

The last interval, 2011 to 2015, contains the most player-producing states from the entire study period, with thirty-four in total (Table 6). The total number of players produced was 156, which is the lowest in the last three intervals. These findings follow the “S-Curve Theory” (Bale 1989). The first two intervals are the incubation period, where the production of players is slow and steady. The third interval indicates the middle phase, where there is a dramatic spike in production. Production in intervals four and five demonstrate the saturation phase, where the production of players is similar to the end of the middle-spiking phase.

California shows a dramatic decrease from the previous interval, dropping from forty-two players to twenty-eight. This suggests that, although the number of players being produced nationally has not declined, the distribution of players has spread to different areas (Table 6).

Texas and New York return to the top three for pure production, though their performances remain consistent for the third successive interval. Missouri increased its production from three players to seven, resulting in a relatively high per capita index score of 2.37. Kansas produced four players, the only players produced throughout the study period. Kansas (along with Hawaii, Missouri, and Utah) is in the top four per capita ranking in this interval. Colorado and Connecticut both dropped by three players to move out of the top five per capita ranking for the first time in three intervals; however, they still show high scores of 1.89 and 1.15, respectively (Table 6). New Jersey and Illinois show regression in their production after their large spikes in the third interval. Notably, Pennsylvania and Utah show small but consistent increases over a fifteen-year period (Tables 4, 5, and 6).

Table 6.—Interval 5: Professional Player Production by State (2011 to 2015).

Rank	State	Pure Production of Players	State Per Capita Index Value
1	California	28	1.48
2	New York	12	1.25
3	Texas	11	0.82
4	New Jersey	9	2.07
5	Florida	9	0.91
6	Pennsylvania	8	1.29
7	Missouri	7	2.37
8	Illinois	6	0.96
9	Virginia	6	1.47
10	Massachusetts	6	1.82
11	Colorado	5	1.89
12	Utah	5	3.44
13	Maryland	4	1.37
14	Kansas	4	2.83
15	Washington	3	0.86
16	Ohio	3	0.53
17	Arizona	3	0.91
18	Michigan	3	0.62
19	Connecticut	2	1.15
20	Georgia	2	0.40
21	North Carolina	2	0.41
22	Wisconsin	2	0.71
23	Hawaii	2	2.89
24	Alabama	2	0.85
25	Minnesota	2	0.75
26	Oregon	2	1.02
27	Indiana	1	0.31
28	Oklahoma	1	0.53
29	Tennessee	1	0.31
30	Delaware	1	2.18
31	New Hampshire	1	1.55
32	Idaho	1	1.24
33	Nevada	1	0.71
34	Kentucky	1	0.46

Summary: Production of Players 1991 to 2015 at State Level

Table 7 presents the data from all five intervals. A total of 525 players hailing from forty-one states played professional soccer from 1991 to 2015. With a total of 129 players, California ranks the highest in pure production, which is almost 25 percent of female professional players. Only sixteen of the forty-one states entered into double figures throughout the entire study period 1991 to 2015 (Table 7). This indicates that although player production has diffused to most parts of the country, just over a third of these producing states have developed players at a larger and more consistent level. These higher-producing states indicate clustering of their production.

Alaska, Delaware, New Hampshire, Idaho, Nevada, Kentucky, Rhode Island, and New Mexico were the eight states that yielded only one player from all five intervals. Most of these states produced that player in the last interval. This indicates that the production of players in these states is either an outlier or they are in the early phase of their development, meaning they may produce more players in the future.

California, Massachusetts, New Jersey, Virginia, and Washington are the only five states that produced at least one player in all five intervals, all of which rank inside the top ten and all scored above the 1.00 national average per capita index, with the exception of Massachusetts, which scored 0.98. All of these states are located in coastal regions, demonstrating that these could be the origin and clustering areas of production (Table 7 and Figure 7).

The West ranks the highest in per capita production. Colorado (1.89), Utah (1.85), and Hawaii (1.79) were the top three. The top East representatives were Connecticut (1.36), New Jersey (1.16), and Virginia (1.15). In the Midwest, Missouri (with a below-national-average score of 0.93) was the highest, which still ranks inside the top ten. The highest-ranking state in the South was Florida (with a per capita score of 0.54), which is almost half of the national average, suggesting that the South is the lowest-producing region for professional players. Only eight of forty-one states are producing above the 1.00 national average per capita index (Table 7 and Figure 7).

Table 7.—Total Professional Player Production by State (1991 to 2015).

Rank	State	Pure Production of Players 1991–2015	State Per Capita Index Value
1	Colorado	21	1.89
2	Utah	11	1.85
3	Hawaii	6	1.79
4	California	129	1.42
5	Connecticut	13	1.39
6	Washington	20	1.28
7	New Jersey	26	1.16
8	Virginia	22	1.15
9	Massachusetts	17	0.98
10	Missouri	14	0.93
11	Nebraska	4	0.86
12	Arizona	11	0.84
13	New York	33	0.64
14	Maryland	9	0.63
15	Illinois	20	0.61
16	Texas	34	0.60
17	Pennsylvania	20	0.59
18	Alaska	1	0.59
19	Oregon	5	0.56
20	Kansas	4	0.55
21	Florida	23	0.54
22	Minnesota	7	0.53
23	Delaware	1	0.48
24	Ohio	13	0.42
25	Georgia	9	0.42
26	Alabama	5	0.42
27	North Carolina	9	0.42
28	Wisconsin	6	0.42
29	Iowa	3	0.38
30	Indiana	6	0.37

Table 7.—Continued.

Rank	State	Pure Production of Players 1991–2015	State Per Capita Index Value
31	Rhode Island	1	0.35
32	New Hampshire	1	0.31
33	Idaho	1	0.30
34	South Carolina	3	0.27
35	Michigan	7	0.27
36	Oklahoma	2	0.21
37	New Mexico	1	0.21
38	Nevada	1	0.21
39	Tennessee	3	0.20
40	Louisiana	2	0.17
41	Kentucky	1	0.09

In summary, the key findings at the state level suggest that the spread of production of female professional soccer players begins and clusters on the East and West Coasts. Player production from these places of origin then diffuse to the interior states, as well as to Alaska and Hawaii (Figures 1–7). Typically, the Midwest and Southern states have been identified as prime hotbeds for male athletes (Rooney 1974). These findings support the hypothesis that the geographic origins of male and female athletes are different. Colorado, Utah, and Hawaii are respectively ranked as the top three producing states in terms of per capita production. This finding is significant because these three states' consistent productions did not begin until the third interval (Figures 3 and 6). This is evidence that these states are areas where diffusion spreads to, as opposed to the areas of origin or "origin points." These states are also in close proximity to California, which has shown evidence of being a state of origin for female professional players. Therefore, an argument can be made that these states are the areas of diffusion from the California origin core. These findings suggest that the West region of the country is the strongest producer of female professional players.

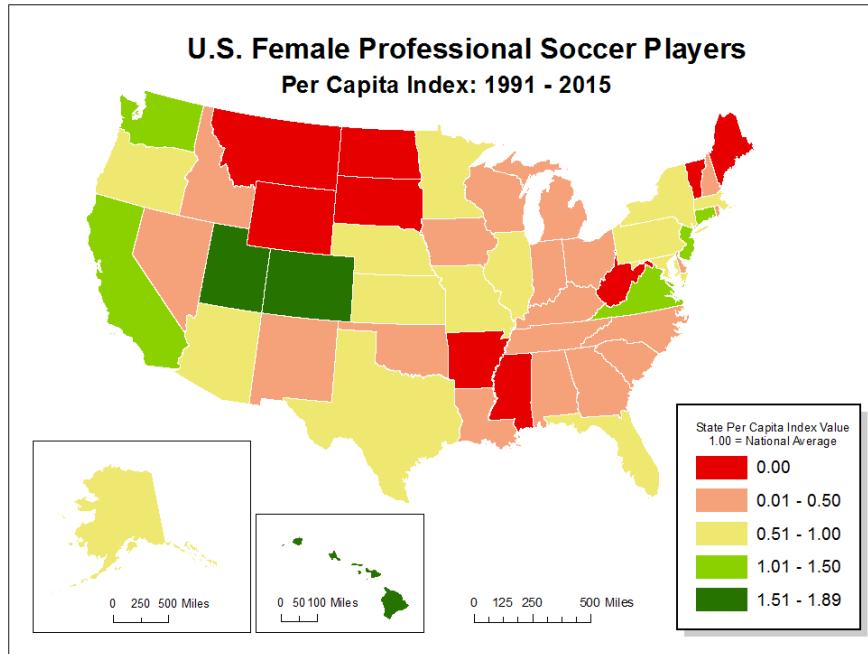


Figure 7.—Total professional player production per capita index map (1991 to 2015).

Summary: Production of Players 1991 to 2015 at County Level

Examination of player production at the state level can reveal the origins and diffusion patterns; however, a more specific examination at the county level can also reveal more details for understanding why certain socio-demographic areas produce more players than others.

A total of 203 counties were responsible for producing 525 players over the twenty-five-year study period. Table 8 shows the top eleven counties from all five intervals. The ranking from this table is based on counties that produced the most players (at least eight), and are sorted based on per capita index scores. These counties, with the exception of Maricopa, Arizona (the lowest-ranked in this table), are located in coastal regions. Of these ten coastal counties, seven are from the West and three from the East.

Table 8.—Top 11 Counties in Professional Player Production (1991 to 2015).

County Name	Abrv	Pure Production of Players 1991-2015	County Per Capita Index Value 1991-2015
Santa Clara	CA	19	5.94
Fairfax	VA	10	5.44
Orange	CA	25	4.62
Nassau	NY	11	4.47
Contra Costa	CA	8	4.37
King	WA	12	3.59
Suffolk	NY	8	3.00
San Diego	CA	16	2.96
San Bernardino	CA	8	2.36
Los Angeles	CA	23	1.27
Maricopa	AZ	8	1.26

From the West region, six of these counties are from California. Santa Clara County, California, which did not perform as strongly in the last two intervals, is the strongest producer of female professional soccer players, based on the per capita index. It produced a relatively high number of players, but what is remarkable is the per capita index score of 5.94, which is almost six times the national average (Table 8).

Figure 8 below shows the location of players produced in the metropolitan area of San Francisco. The players are mostly located in the suburbs of San Jose, California. Figure 8 also shows the distribution of players from the New York metropolitan area, again showing a concentration in suburban areas, most notably in Long Island, New York. The maps show a comparative examination of two large metropolitan areas (San Francisco and New York) and indicate that with the exception of Oakland, California (it produced only three players), virtually no players come from the inner city areas. This feature underscores the point that most players come from the suburbs of major cities in these coastal regions (Figure 8)

Orange County, in Southern California, produced twenty-five players, which was more than any other county, and has a relatively high per capita index score of 4.62, which is over four-and-a-half times the national average. Orange County is also, arguably, the most consistent producing county nationwide. Below is another comparative map of two large metropolitan areas:

San Francisco Metropolitan Area



New York City Metropolitan Area

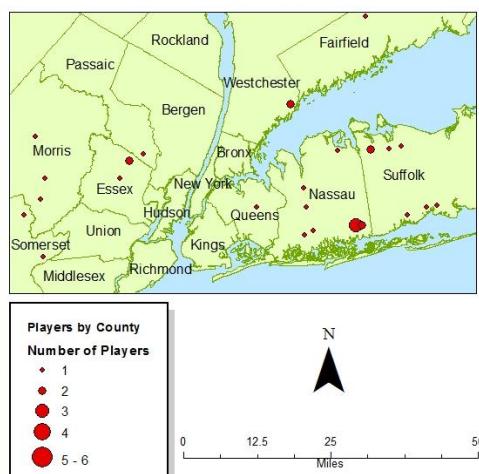
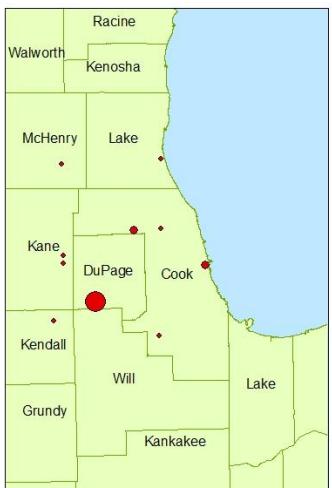


Figure 8.—Total professional players: San Francisco and New York areas (1991 to 2015).

Chicago, Illinois, and Los Angeles, California. Figure 9 shows the location of players in Orange County, in proximity with the city of Los Angeles, known for many suburban areas within its city limits. The map of Los Angeles, the largest-producing part of the country, shows that most of the players are from the suburban areas. Collectively, the state of Illinois produced a relatively

Chicago Metropolitan Area



Los Angeles Metropolitan Area

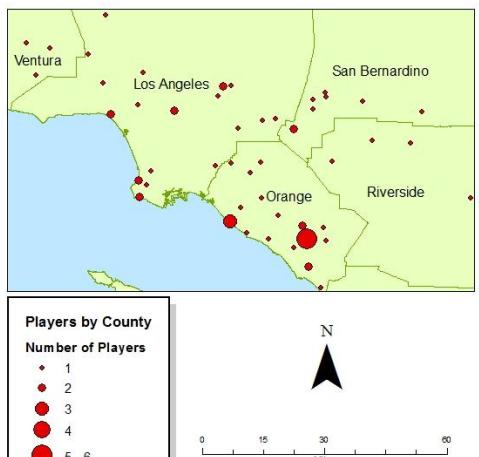


Figure 9.—Total professional players: Los Angeles and Chicago Areas (1991 to 2015).

high number of players (twenty in total), and most of these players come from the suburbs of Chicago. This is evidence to support a claim that most players come from suburban areas close to major cities (Figure 9).

Contra Costa County, California, and San Bernardino County, California, both produced eight players. Contra Costa was ranked higher in terms of the per capita index, producing more than one and a half times the players produced by San Bernardino. A similarity between both Contra Costa and San Bernardino Counties demonstrates that their greatest production occurs in the later intervals, which would support a hierarchical diffusion theory (Bale 1989).

The counties of Los Angeles and San Diego produced twenty-three and sixteen players, respectively. Los Angeles, which produced players in four of the five intervals, scored 1.27 on the per capita index. Although this was relatively low in the top ten ranking, it still maintains a score above the national average. San Diego produced at a stronger rate than Los Angeles; as one of the five counties that produced players in all five intervals, it scored 2.96 in the per capita index, which is almost three times the national average. Interestingly, the exact locations of the players in these counties (Figure 9 for Los Angeles), suggest that the players came from suburban areas, as opposed to the core urban areas.

Fairfax County, Virginia, which was one of the five counties to produce at least a single player in all five intervals, had just over half of Santa Clara's total, but scored 5.44 on the per capita index. Geographically, Fairfax is a suburb outside of Washington, D.C. The other two eastern counties in this top ten ranking are Nassau, New York, and Suffolk, New York, which are neighboring counties on Long Island, New York. Both of these counties are suburbs of New York City, further providing evidence that the top producing areas are in suburban areas located near major cities (Figure 8).

King County, Washington, which is also located on the West Coast, produced twelve players in total, with a score of 3.59, which is over three and a half times the national average (Table 8). The county was also one of the five to produce players in all five intervals consistently. The individual locations of these players suggest that they are close to the city of Seattle, Washington; however, they still tend to follow the trend of being located in suburban areas. Maricopa County, Arizona, which contains the city of Phoenix, produced eight players, with a per capita score of 1.26. This was the lowest per capita score of the top eleven, and, as previously stated, the only county in this list that is not located in a coastal region. The county also follows a pattern

similar to that of King, though, whereby players are in close proximity to the major city but are still produced in the suburban areas.

The summary of results indicates that most female professional soccer players' place of origin can be located in coastal regions favoring the western side of the United States and in suburban areas of counties that are in close proximity to major cities.

Analysis and Discussion

Finding a single reason why the suburbs that are in the proximity of major coastal cities identify as both the origins and leading producers of professional female players is likely not possible. Rather, a series of reasons or explanations is needed.

The heavy influence of suburban places of origin is a good starting point for this explanation. As Keyes (2014) explains, the mass post-Second World War expansion to the suburbs created an emergent middle class. What was also created is a different landscape that affected the culture of youth activities. In urban or inner-city neighborhoods, it is common to see children playing sports out in the streets with their friends. The definitions of these activities would vary, but none more so than the ones influenced by favorite national professional sports. Notably, most of these children were male, as it was not socially acceptable for girls to play "rough" sports (Young 1990). Children would idolize their sporting heroes, organize and officiate their own games, and in most cases even keep their own scores and records. With the emergence of the suburbs in the United States, this culture drastically changed, especially in the late 1960s and throughout the 1970s and 1980s. The geography of the suburbs meant that the larger distances in neighborhoods was one of the main factors that did not logically allow children to continue this culture. Transportation was required, which meant the involvement of parents (Keyes 2014). In this new suburban culture, middle-class parents could supervise their daughters and, therefore, feel safe with them participating in activities. This was a significant factor in the introduction of soccer to young females.

The fact that soccer was chosen as a sport for young females to participate in can be traced to the differences in social class. Simply put, the working classes have never really promoted the inclusion of females in sports. This has been represented in the global history of sports that are dominated by the working classes. This sexist exclusion of women, together with the exclusion of soccer in the United States, formed a unique partnership between the sport

and females—a partnership that was adopted, nurtured, and developed by the middle class. This introduction of soccer as a key part of youth in the suburbs offers an explanation for the large number of female professional players that have been produced in these areas.

The state of California is the leading producer of female professional soccer players. Keyes (2014) points out that the transformation of soccer as an Americanized sport started in Los Angeles in the late 1960s with the creation of the American Youth Soccer Organization (AYSO). It was responsible for branding and promoting the marginalized sport of soccer, by making it family-friendly and tagging it with a "safe" image. This organization quickly spread into most suburban areas of California and then into other parts of the country. The organization turned out to be, and still is, a big influence for the growth of the sport in middle-class youth culture. This would perhaps explain why California dominates the production of female soccer players. As many as six different counties in California are the leading producers of female soccer players.

The innovative role of an organization like AYSO could suggest that the origins of women's soccer started in this part of the country, and therefore, following Rooney's (1974) ideas about sporting legacy, would explain why these places demonstrate clustering rather than hollowing by diffusion. However, the creation of AYSO is not enough to explain the vast numbers of players who have been produced in this state; there are several additional explanations. California has large, heavily populated suburban areas, which are similar in size to small cities. Rooney (1974) discusses the importance of the size of places for team sports. He argues that a city that is too big would impact the popularity of a team sport by limiting the number of opportunities to play. This is an important observation from the time of Rooney's (1974) writing, when high schools were the main institutions offering competitive soccer for teenage children. However, regardless of the size of the school, there usually was only one team that athletes could try out for, meaning that the competition for places would be too high and that athletes would lose interest. Rooney (1974) also discussed the disadvantage that comes with places that are too small: there simply are not enough players to make a competitive team. Suburban areas such as Orange County and Santa Clara County have relatively medium- to large-sized populations which, according to Rooney (1974), is a positive factor in producing competitive athletic teams.

The identified and highlighted California hotbed of female soccer talent boasts fair climates that enable soccer to be played outdoors all twelve months

of the year. This is a huge advantage over states in New England, much of the East Coast, and large parts of the Midwest, which cannot offer the same desirable climate. This would be an advantage for developing skills in longer periods of time. It may also explain why many of the northern states with harsh, cold climates and some southern states that experience excessively hot and humid climates, produced very few (if any) players. This difference in climate could also explain why the findings show that the West edges the East in the production of professional female soccer players.

California is also well-known as a melting pot of different cultures of innovative, progressive, educated, and modern people, such as the founders of AYSO, who came up with the innovations of balanced teams and every child participating. An argument can be made that progressive and modern parents of young females would be supportive and encouraging to see them succeed as professional athletes. This is perhaps a striking contrast to a part of the country (such as the South or the Midwest) that hosts cultures with more traditionalistic and conservative values, especially when it comes to the role of women in modern society. It is this argument that may explain why the South and the Midwest were some of the lesser producers of female professional soccer players. This finding is significant because the Midwest and South regions are typically hotbeds of elite male talent and would therefore disprove any assumption that there is no significant difference in the distribution of male and female athletes' origin areas.

California's case may also explain why there are strong performances of states in the West (such as Colorado, Utah, and Hawaii), which were ranked as the top three per capita producers in the country. By examining the timelines of the results, one can see that these three states did not start significant player production until the third and fourth intervals, which suggests hierarchical diffusion (Bale 1989). This study identifies California as an "origin point" for female professional soccer players, with significant player production in all five intervals. Therefore, this study argues that hierarchical diffusion of female professional soccer players in the West started in California and continued into the states of Colorado, Utah, and Hawaii. Unlike both New York and California, the production of players comes from concentrated areas in these states, which suggests that diffusion resulted in certain clustering. Washington demonstrates a pattern similar to these "smaller states," where production of their players is mostly in one concentrated area. A notable difference between the state of Washington and the states of Colorado, Utah, and Hawaii is that Washington can be considered an "origin point" because the state has demonstrated significant player production in all five inter-

vals. This is also a characteristic of the state of Virginia, on the East Coast. Therefore, this study concludes that, because of their most significant and consistent production, the origin areas of female professional soccer players in the United States are the states of California, Virginia, and Washington.

Comparisons between the leading California counties (Orange and Santa Clara) and the leading East Coast counties (Fairfax, Virginia; Nassau and Suffolk in New York) show strikingly similar demographics and other characteristics. All five of those counties are the suburbs of major cities, near the coastlines, and have similar population sizes. Another interesting observation is that these counties all voted liberal-left in the 2016 United States presidential election (*Politico* 2016), including Orange, which is usually not as liberal or progressive, further supporting the claim that female soccer players often come from the progressive middle classes.

The United States Census shows that these top-rated counties are all ranked in the top 100 of the wealthiest counties in the nation. Wealth in American youth soccer is a key and crucial factor for development of elite-level soccer. Youth soccer in the United States is an organized professional institution. In other words, it is a business. Families have reported spending in the area of \$2,000 to \$10,000 a year for their children to play at a competitive club level (Keegan and Santichen 2015). The families that spend the most are usually represented in highly skilled teams with the most qualified and experienced coaches and with state-of-the-art training facilities. Some players begin playing at the age of eight to secure the opportunity of landing a spot on a top team. Some players will also continue to play for up to ten years, which, if one calculates the approximate annual cost of playing soccer (Keegan and Santichen 2015) multiplied by ten, can amount to anywhere between \$20,000 and \$100,000. It is easy to see why a working-class family without a significantly high household income would be unable to place their child in top-level soccer education. It is worth discussing the existence of competitiveness in these suburban communities. The old saying "keeping up with the Joneses" applies here, meaning that a culture of measuring wealth and success exists in these suburban areas. This could be applied to which soccer team a child plays on. It may be trendy to have a kid on the best club team, which can also translate to the most expensive team, and this can be seen symbolically as a sign of wealth or a form of conspicuous consumption. It is this wealth that would explain why there is clustering, or "*(class)ter*" in areas of the country that can afford to pay for the very best soccer education. The term "*(class)ter*" implies a certain nexus between geographical clustering in certain suburbs and the dominance of a single sociocultural

cohort, the middle to upper class that has occupied the command position and grown the largest within the space of this sport. This would explain why the characteristics of the areas that produce the most female professional players are almost identical from a geographic and sociocultural perspective. It is also not surprising that some of the most successful youth soccer clubs in the nation are located in these areas. With the exception of Orange County, these “(class)tering” counties are also often liberal and progressive places. In contrast to more-conservative and -traditionalistic places, this plays an important role in the development of female athletes because liberal areas would clearly be more supportive of this development. We can also examine the states that failed to produce any players as a comparison to the “(class)tering” cases. Mississippi and West Virginia are good examples of states that have the climate and population numbers to play soccer, but due to the lack of wealthy communities (the 2010 Census shows they are the two poorest states, with median incomes of around \$20,000 to \$25,000) many families there simply cannot support a top-notch soccer education. These points may explain the assumption that female soccer players are from the middle and upper-middle classes.

An interesting factor in all of this is Markovits and Albertson’s (2012) research on female fandom. Their work has established that most females participate in soccer not by following the sport, but by playing it. They argue that females do not recreate the typical sports cultures of following professional teams, studying statistics, or engaging in “sports talk.” In other words, they do not consume sports like men do. The fact that male professional soccer is more popular than female professional soccer would be the obvious argument in this case. But it is not. Quite simply, females tend not to follow what happens in the game outside the boundaries of the field that they are competing on. The fact that the sport has grown in these identified areas of origin without the typical sports culture is truly remarkable. Title IX can offer some explanation for this. Title IX was a change in legislation that forced universities to offer equal funding to both male and female student athletes. This led to a dramatic increase in university programs offering soccer and, more importantly, offering scholarships to play collegiate sports. This ultimately led to the creation of the national women’s team and its unrivaled success at the international level. The argument that exists here is that Title IX enabled more participation for women in sports, specifically in soccer, and replaced the typical sports culture of “following” that exists in male sports culture with a platform for women to remain in the sport and progress to a professional level.

To summarize, over the twenty-five year period of this study, origin and diffusion patterns reveal that 525 players hail from all but nine states. Based on the hierarchical innovation diffusion model (Bale 1989), the origin cores of these players have been traced to larger metropolitan areas on the East and West Coasts, with a spread into smaller surrounding periphery in the interior of the country. Most of these players come from the West Coast, particularly California. There are five counties that managed to produce players in all interval periods. An examination of these counties reveal striking similarities. All five were located within coastal regions in the proximity of a major city. All were wealthy, white suburban, and often liberal communities. The South and Midwest regions of the country were relatively the weakest at producing female professional players, which is in polar contrast to the production of elite male athletes.

Conclusion

This research addresses a deficiency in sports geography by identifying female professional soccer-player origin areas and revealing diffusion patterns over a twenty-five year period. Key findings of this study reveal that most female players come from suburban, middle to upper-middle class, high-income communities close to major cities that are mainly in coastal regions. From a per capita perspective, the results show that states in the West produce more players than states in the East. Results also indicate that the South and Midwest regions are the weakest-producing areas.

The results of this study reveal the professional female athlete origin areas and conclude that these are different from those of professional male athletes. This invites future research into identifying the origin areas of female athletes in other countries, especially those that are somewhat similar to the United States. The timing of this type of research for many sports geographers is fortunate due to the large interest in and growth of professional women’s soccer, particularly in Europe, which now has many countries beginning to offer professional women’s leagues. Research on women in individual and other team sports often lacks a geographic perspective. An opportunity to look at other professional sports and their organizations, such as golf and the Ladies Professional Golf Association (LPGA), or basketball and the Women’s National Basketball Association (WNBA), seems to be especially promising, perhaps in comparing the origin areas of these athletes with those of professional women soccer players.

From a sociocultural perspective, perhaps research into the motivations of females pursuing their goals of becoming professional soccer players (versus

the motivation of males) is very appealing. With the giant gap in financial rewards and limited social mobility opportunities, research into this topic may reveal some interesting findings.

Another potential future research topic from this study could be identifying the origin areas of male soccer players in the United States and comparing them to the origin areas of female soccer players and other American male athletes. Due to the marginalization of soccer in the American sports landscape, there is a low perception of upward social-mobility opportunities in soccer. This perception could perhaps repel high-level American athletes, especially from lower classes, from pursuing a career as a professional soccer player and provide more opportunities to players from different backgrounds. The findings from this study indicate that there is a strong chance that the origins of these United States male soccer players could be similar if not identical to those of United States female players.

Finally, due to the chronological structure of the methodology of this study, there is a potential for revisiting this research in the future and examining whether the origin and diffusion areas that were identified experience any changes. The push for this may come if soccer continues to gain popularity and, more importantly, financial support, which could potentially provide greater opportunities for females from the lower social classes to become professionals.

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Mapping Arcata Neighborhoods and Perceptions

Nathaniel Alexander Douglass
and
Nicholas Perdue
Humboldt State University

Abstract

People inhabit and tend to associate vernacular names with ill-defined neighborhood boundaries, resulting in socially bounded geographic spaces with unique characteristics and identities. These spaces are more the products of “mental” or “cognitive” maps created by the everyday citizen rather than true administrative boundaries. This research attempts to locate the boundaries of neighborhoods in Arcata, California, in order to understand how neighborhood spaces across the community are perceived due to various social, cultural, and geographic factors. Such factors include temporal dichotomies, demographics, and economic characteristics highlighted by low-income housing and commercial chain stores. This study uses innovative participatory mapping techniques that enable Arcata citizens to define the geography of neighborhoods in the community and provide insight into the perceptions associated with them. Several map products, derived from the collection of citizen renderings of the community, show an overlapping topography of bounded spaces, vernacular names, and perceptive characteristics that highlight the unique spatial characteristics of community spaces and challenge our ideas about the ways in which residents imagine their city.

Keywords: *mental maps, cognitive mapping, neighborhood mapping, neighborhood perceptions, GIS, cartography*

Introduction

NEIGHBORHOODS ARE COMMONLY ARGUED, in both lay vernacular and larger bodies of literature pertaining to urban geography (Park et al. 1967; Coulton et al. 2001; Stow et al. 2010), as being neatly defined spaces that abruptly end at defined boundaries and harbor distinct cultures and identities that are embodied by their inhabitants. Neighborhood spaces evoke an assortment of specific practices and emotions in their inhabitants and visitors, which can shift dramatically when one crosses the intangible edges and individually constructed boundaries into other neighborhood spaces. The way we perceive and personally interact with neighborhood spaces, however, often stands in stark contrast to the institutional or top-down

organization of cities, where neighborhoods are neatly defined containers and their boundaries are clearly delineated, named, and are distinctly unique from one another (Figure 1).



Figure 1.—Neighborhood map of San Francisco. (Nathaniel Douglass map; source: SFgov.org)

The primary issue with understanding urban space within this top-down organization of cities is that perceptions of where neighborhood boundaries start and end vary greatly from person to person, creating a disconnect between institutional conceptions and human perceptions of space (Coulton et al. 2001). This research contends that neighborhoods have ambiguous boundaries, associated vernacular names, and distinct perceptual identities which are products of cognitive or mental maps created by everyday citizens. Developing a better understanding of perceptions of neighborhood boundaries can help alter views and shift decision-making responsibilities to the people who inhabit these spaces. Conceptualizing neighborhoods as fluid,

overlapping, and constantly shifting spaces allows citizens and planners to conceptualize how to create connections between seemingly discrete units, how to think about spaces of concordance and discordance in the urban structure, and how to create a sense of place and community in more holistic ways. Understanding the naming of these places is as important as understanding the boundaries (Alderman 2010). A vernacular name often refers to a popular name that exists “as part of popular folk culture” and “is a product of the spatial perception of average people” (Jordan, 1978, 293) and, ultimately, the responsibility of naming is appointed to the “minds of the untutored” (Zelinsky, 1980, 1). Denevan (2009) illustrates the slippery nature of boundaries, citing the famous definition of boundaries presented by geographer Carl Sauer (1936): “Almost all boundaries other than political ones are anything but lines, yet the whole business of studying areal differentiation suffers because of the simplification of the concept due to the political map” (169).

Drawing boundaries and naming spaces embeds particular identities, perceptions, and sets of behaviors for the people who inhabit and move through the space (Newman and Passi 1998). San Francisco, for example, has a rich array of neighborhoods, each harboring uniquely distinct sociocultural identities, social dynamics, and spatial practices. Neighborhoods such as Presidio Heights and South of Market might identify as places of affluence, while the Castro identifies as being an inclusive space for the LGBTQ+ community. With over forty distinct neighborhoods, San Francisco demonstrates how the division of cities into bounded spaces might impact the people who live in them and, in turn, how the people who live within a neighborhood might influence the nature of the neighborhood.

The lines of where one neighborhood begins and the other ends are not as clearly defined as they appear on a map. Two people will often have different opinions as to the extent of a neighborhood's boundaries. Furthermore, the same two people may refer to this area with different names, providing additional inconsistencies in identifying these spaces. The perceived spatial and vernacular boundaries of neighborhood spaces shape the cultural topography of the urban experience in ways institutionally defined administrative neighborhood maps fail to capture (Coulton et al. 2001). The purpose of this research is to contribute to theoretical debates in urban geography by developing an approach for measuring and cataloging individual perceptions of neighborhoods in Arcata, California. This approach uses a participatory mental mapping exercise to extract from citizens spatial data about perceived boundaries and vernacular names of neighborhoods. The research will ad-

dress three main questions: (1) How do people individually define and name neighborhood boundaries?, (2) How do perceptions of these boundaries influence positive and negative associations with spaces in the city?, and (3) What does this collection of individual perceptions and associations indicate about the city as a whole?

In order to address these questions, the paper presents an in-depth explanation of the study area, detailing the importance of this research to a small community such as Arcata. Next, the paper reviews past works regarding mental maps, vernacular names, and neighborhood perceptions to provide context for the conceptual framework. Following this, the study details its methodology, which utilizes participatory mental mapping techniques to extract, georeference, and analyze perceptual data from the research participants. Finally, results are analyzed and produce a range of cartographic visualizations to illustrate how individually defined neighborhood boundaries and their emotional connotations rearrange the spatial order of Arcata and brings to light a deeper sense of place within the community.

Study Area

Arcata is a small, college town with a population of approximately 17,600 people located on the coast of Humboldt County, 275 miles north of San Francisco (US Census 2015). Arcata has a level of activity higher than its population, however, including approximately 8,000 students (Humboldt State University 2017), a growing tourism industry, and a high number of Humboldt County residents who live in the rural parts of the county and irregularly come to town for goods and services or work-week lodging. Additionally, there is a large, non-resident workforce that moves through the city seasonally, primarily driven by the cannabis industry. As a result, the number of people occupying the private spaces and moving through the public spaces of Arcata is considerably higher than population numbers indicate, which has a considerable effect on how residents perceive and interact with particular neighborhoods in the city.

This indicates that Arcata is highly in-flux and that the neighborhoods in the city are constantly transforming, expanding, shrinking, being renamed, and changing identities at a rate not reflected in official city maps and planning documents.

Preliminary research shows that there are twenty-seven distinct, predetermined, vernacular neighborhood names in the city of Arcata (Table 1), despite its relatively small population and physical size. Existing neighborhood

names were gathered from observing sources such as Google Maps, the City of Arcata, and Nextdoor.com (<https://nextdoor.com/>), a website designed to connect residents to their neighbors and also provide a listing of other neighborhoods in the area. These sources provided the entry point for the research, providing the base spatiality of vernacular areas that currently exist.

Table 1.—Number of neighborhoods retrieved from each source (duplicate records included).

Source	# of neighborhoods listed
Google Maps	6
City of Arcata	16
Nextdoor	12



Figure 2.—Locator map of Arcata in Humboldt County. (Nathaniel Douglass map)

Each neighborhood is unique, with a distinct sense of place created by the citizens of Arcata. With an increasing population mostly due to an influx of students, the contrast in perceptions of various neighborhood locations may differ greatly between new and longtime residents and also may change over time. Organizations such as city government, Realtors, and property managers rely on the culture and characteristics of particular neighborhoods for a variety of financial, redevelopment, and planning purposes. This research aims to add nuance to these decisions and give insight into how Arcata residents perceive the places they inhabit.

Definition of Terms

Mental Maps

Mental or cognitive mapping is the product of a series of psychological processes that work to synthesize spatial and nonspatial information that is retained from our everyday life (Downs and Stea 1973). Mental maps are models of the environment and surroundings, which are built up over time in the minds of individuals (Sarre 1973). The mental images are expected to change from person to person, creating unique personal perceptions and constructions of the exterior world. Rarely are these images ever communicated, but they can be utilized to collect data about the environment and the way in which people think about space (Lynch 1960). Further research suggests that individuals utilize these cognitive maps to make decisions about their spatial environment, which then dictate their actions and perceptions (Kitchin 1994). Academics in the field of geography and psychology have conducted qualitative research to reveal the spatial images inside people's minds by having participants communicate the environment with pencil and paper. In the most practical sense, mental maps are hand-sketched maps drawn by participants to provide images of an area that indicate individually defined and personally relevant features and landmarks (Kitchin 1994). Others ask subjects to participate in "free-recall" sketches, where the participants are invited to draw a map of the city in question as if they were trying to show a stranger things they "ought to see." In doing this, we are able to view what the subjects were most focused on and how their spatial images differed from one another (Pocock 1972).

More recently, cognitive maps have been used in research projects to understand everything from individual spatial narratives (Boschmann and Cubbon 2013) to segregation in cities (Raan and Shoval 2014) to measuring transnational territorial conflicts (Reuchamps et al. 2014). Using mental maps as a research method has long been a tool used by geographers to acquire a range of individual spatial information and continue to this day on the forefront of innovative geographic methods. Acquiring personal spatial data regarding territory and emotional perceptions has become possible through sketched mental-mapping activities (Raan and Shoval 2014). Advancements in geospatial technology have significantly increased opportunities to exploit mental maps in research projects, as researchers can now create front-end products to allow participants to map interactions and movements through the environment, or create back-end programs to georeference analog mental-mapping activities into a spatial database. In this capacity, digital mental mapping approaches are one of the stronger

mixed-method approaches available to geographers, allowing researchers to gather and analyze a range of personal geographies quickly and efficiently.

Vernacular Names

A vernacular place name refers to a popular, or everyday, name that exists within the lay-person vocabulary to describe a particular area or region (Jordan 1977, 293). A corporate or government entity may attempt to redefine and rename neighborhood spaces, as is the case with many urban redevelopment projects, but how the space comes to be known is ultimately a creation in the "minds of the untutored" (Zelinsky 1980, 1). Jordan (1977) delves into how spaces are known through administering surveys to students to measure and map regional locations and their vernacular names, illustrating how a study using a simple base map and mental-mapping activities can reveal the perceptual regional vernacular of local participants. Zelinsky (1980) conducted his famous work on mapping the North American vernacular regions, using hundreds of directories to search for common vernacular names referring to major areas of the United States. Rather than asking individuals to share their mental images or where they perceive these regions to be, Zelinsky argued that these regions are already in place by the masses and can be identified by enterprise names in various directories. Zelinsky further proves that qualitative, distinctive regions across the country are rather apparent and locating them is as simple as recording common terms already present in popular culture.

While Zelinsky acquired far more terms and names, Jordan's approach allowed him to find the most localized vernacular uses in a necessarily qualitative fashion. Both methods provide a foundation for how mental maps can be used to map cultural phenomena on the state- and country-wide level. In more recent practice, Brennan-Horley (2010) conducted research on mapping the creative hotspots in the city of Darwin, Australia, through qualitative mental mapping. Drawing from Jordan, interviews were conducted with a base map-provided activity for participants to locate creative regions of the city. Utilizing GIS technology allowed the research to be conducted in a calculated fashion where maps could be analyzed and stored digitally. Brennan-Horley's research provides a methodology using qualitative GIS processes that aid in acquiring individualized spatial data, which can then be analyzed with an assortment of visual, qualitative, and geo-statistical techniques.

Neighborhood Perceptions

Unlike geographic classifications like states, counties, or census tracts, neighborhoods lack a formal governmental demarcation and are more often social constructions of a particular physical environment (Lee and Campbell 1997). Thus, each resident's definition and delineation of a neighborhood will differ based on their personal experiences and individual perceptions of their city. Raban (1974) suggests this perceptual variation is best conceptualized as the softness of the city, stating, "A city forces a person into complete anonymity within it, while also exposing a 'softness' of the city that awaits a cultural or emotional imprint. The city invites its residents to remake it and consolidate it into a shape you can live in," (Raban 1974, 11). Lee and Campbell (1997) suggest that people define their neighborhood through three unique dimensions. The first is referred to as the demographic dimension, referring to factors like race and income level. The second dimension is symbolic identity, and this refers to the neighborhood's name, if there is one, and to what extent the residents agree upon the name. The final dimension is the physical, which can be seen as a cultural or physical landmarks that might define the area (Lee and Campbell 1997). This suggests that each neighborhood will be perceived differently through the eyes of each resident, and perceptions will vary based on whether the area is one's own neighborhood or an adjacent neighborhood. Furthermore, the way in which a resident classifies a neighborhood through these dimensions is often perceived as having positive or negative connotations.

Jordan (1977) capitalized on this idea of perceptions by categorizing the most commonly used names for regions in Texas, as being negatively or positively derived. He found that words and phrases such as "Big," "Golden," and "Sun Belt" made reference to some uplifting undertone and suggests a positive self-image of the area, while phrases such as "Barren Wasteland," "Tornado Alley," and "Brown Belt" were negatively connotated and hinted at some perceptually less-than-favorable physical or racial image (Jordan 1977, 301–302). Descriptions like these not only help us understand the attitudes and perceptions harbored by those in individual neighborhoods, but they also aid in creating a broader understanding of how the city, as a whole, is constructed and the internal tensions that may be at play.

Methods

In order to identify vernacular neighborhoods in Arcata, 118 adults were surveyed within a two-week period during March of 2017. Surveys were administered to student residents in university classrooms as well as to non-student residents at local functions such as the Chamber of Commerce. The survey began with introductory questions designed to gather information on participant's age, gender, occupation, and time of residence in the area (see Appendix). Humboldt County residents were targeted for the survey, assuming that they were familiar with the city of Arcata. If a participant currently lived in Arcata, he or she was prompted to write the name of his/her neighborhood, in order to provide a preliminary list of vernacular names. Rather than asking participants to draw neighborhoods from scratch, like many mental-mapping activities, a basemap was provided to allow subjects the chance to focus on identifying boundaries and outlining. The map extent covered all of Arcata and was printed on 11 x 17-sized paper, providing participants with enough detail to read street names and various landmarks such as the downtown Arcata Plaza, local hospital, Humboldt State University, marsh, etc. (Figure 3). The base map was created in QGIS, an open-source GIS software package, utilizing geographically accurate data

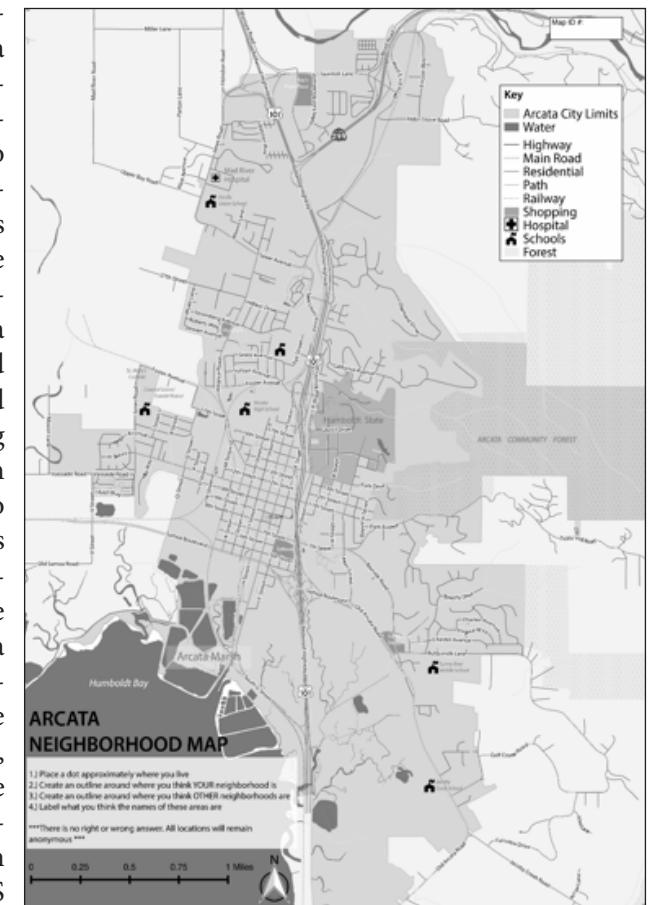


Figure 3.—Example of blank base map printed for participants to outline neighborhoods. (Nathaniel Douglass basemap)

so that the acquired answers could be easily georeferenced and digitized for later analysis (Brennan-Horley 2010). As other research shows, the size and shape of the paper map can affect the type of results a researcher will receive (Pocock 1972, 120). For the present study, the map was printed at a large-enough size and scale to allow subjects to use common streets and physical features as indicators for neighborhood boundaries. Participants were given a black-and-white copy of the map and were asked to first mark where they lived and then outline their own neighborhood in addition to subsequent ones (Figure 4). Since the survey was anonymous and no personal identifying information was recorded, participants were able to mark their location knowing that their privacy was being considered. Additionally, as surveys were completed, the administrator immediately filed the survey to ensure that data could not be associated with each participant. By introducing the map early on in the interview and asking spatial questions, participants were oriented with the map and encouraged to think and respond spatially for the rest of the questionnaire (Brennan-Horley 2010, 39).

The next section introduced the list of twenty-seven common neighborhood names, previously discussed, in order to jog participants' memories. This section was also used to determine which of the twenty-seven neighbor-

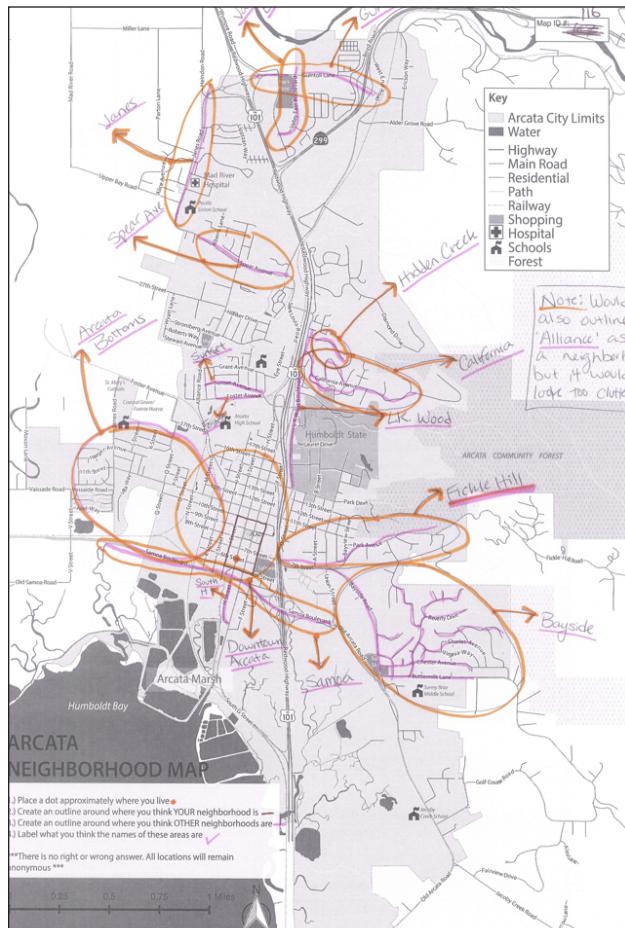


Figure 4.—Example of completed mental mapping activity.
(Nathaniel Douglass basemap)

hoods were recognized by residents and if their neighborhood appeared on the list. Jordan (1977) demonstrates the importance of a survey such as this being conducted "under controlled conditions designed to prevent prior discussion or suggestion of 'correct' answer," (293). Similarly, introducing common neighborhood names after having subjects participate in a mapping exercise ensures that the first set of mapping-related questions are the participant's true, unbiased answers. However, it is important to note that subjects were also given the opportunity to make any changes to their map after being exposed to new information. This allowed for participants to not feel restricted to a specific list of neighborhoods, but also gave residents an opportunity to use neighborhood names that might not have been easily recalled. Additionally, participants were asked to cross out any of the neighborhoods that they didn't recognize, providing a list of what neighborhoods were commonly referred to by residents.

The last section of the survey included a table for participants to list neighborhood names and write a series of words or phrases that might be associated with that neighborhood or that best describe it. An example was given (Downtown: "community," "energetic," "family oriented") to give participants an idea as to what the question was asking. Answers were categorized as being positive, negative, or neutral descriptive phrases. Following the col-

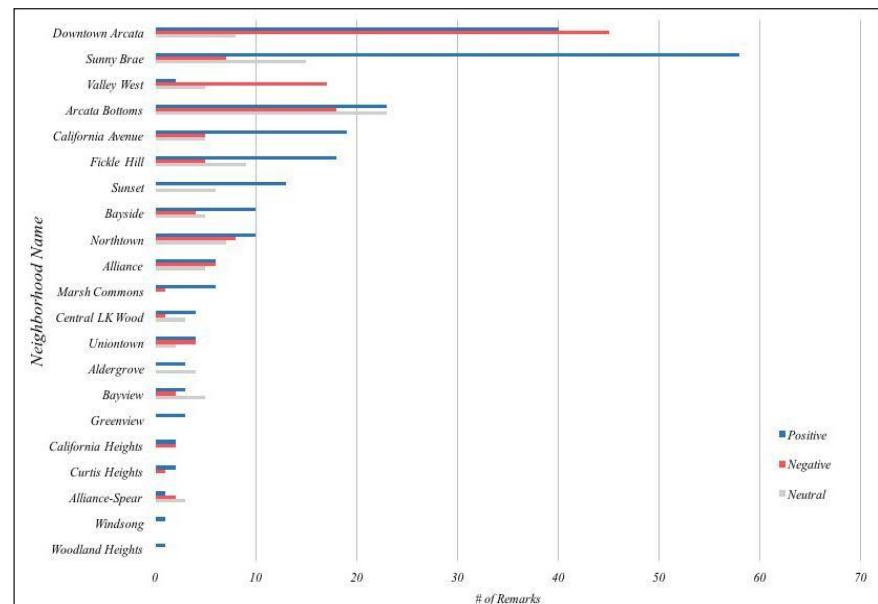


Figure 5.—Graph depicting the count of positive, negative, and neutral responses for each neighborhood.

lection of survey data, answers were logged and each map was scanned, programmatically georeferenced, and converted to individual digital images (Brennan-Horley 2010). Once every map was correctly georeferenced, the outlines were digitized and categorized by neighborhood to provide a visual display of the varying boundaries.

Results

Results from the survey questionnaire show variations in vernacular names and neighborhood boundaries in Arcata. Section one of the survey questionnaire found that most of the participants had lived in Arcata for fewer than five years and were primarily students. Due to the present availability of participants, this study primarily focused on perspectives from students and their perceptions of Arcata neighborhoods. The following will discuss three distinct results from this study: analysis of neighborhood names, variability in neighborhood boundaries, and qualitative neighborhood perceptions.

Neighborhood Names

The initial analysis from section three (see Appendix) of the survey shows a disconnect between the names that government entities and redevelopment projects assign to neighborhoods and those that are actually used by Arcata's residents. Neighborhoods such as Central LK Wood, Pacific Manor, and Alliance-Spear were recognized by more than 70 percent of participants, while neighborhoods such as Woodland Heights and Windsong weren't recognized at all by participants. Subjects were then asked if their neighborhood was present on the list of twenty-seven names presented to them earlier. From this, 52 percent said "yes," 35 percent said "no," and 12 percent marked "N/A" since they currently didn't live in the city. The 35 percent of participants who answered "no" were still asked to write the name of their neighborhood, which generated twenty-nine new neighborhood names that differ from the original list. This finding shows a series of vernacular neighborhoods that are not recognized by the City of Arcata or corporate entities such as Google Maps and Nextdoor.com, highlighting how vernacular place names are a product of the spatial perception of average people and, ultimately, the responsibility of naming of places is appointed to the citizens of a city. These twenty-nine additional neighborhood names provide insight into the disconnect between government-appointed names and those given by residents, as well as how residents perceive the spatial orientation or formation of these neighborhoods.

Neighborhood Boundaries

After neighborhood outlines were compiled, categorized, and overlaid onto individual maps, the variability in neighborhood boundaries revealed that participants harbor conflicting mental images as to where various boundaries start and end. Each set of boundaries was categorized by the name given by participants. The Downtown, Valley West, and Sunny Brae neighborhoods were most commonly represented (Figures 6–8). In these maps, each neighborhood boundary was overlaid onto one another in order to show the most commonly agreed-upon location for each boundary. The lightest color represents no overlap in a participant's neighborhood outline, while the darkest color indicates areas where five or more outlines overlapped. In essence, these maps depict the ever-ambiguous nature of neighborhood boundaries by outlining the spatial consensus between participants' answers, as well as outlying areas of disagreement.

The borders that define these spaces can be explained by certain structural urban landmarks and are often influenced by local businesses and services. For example, in the context of the Downtown neighborhood (Figure 6), the primary identifying feature is the plaza square that is located in the heart of Arcata. In all outlines given by participants, the plaza is within each outline and can be agreed as being in the Downtown neighborhood. Additional

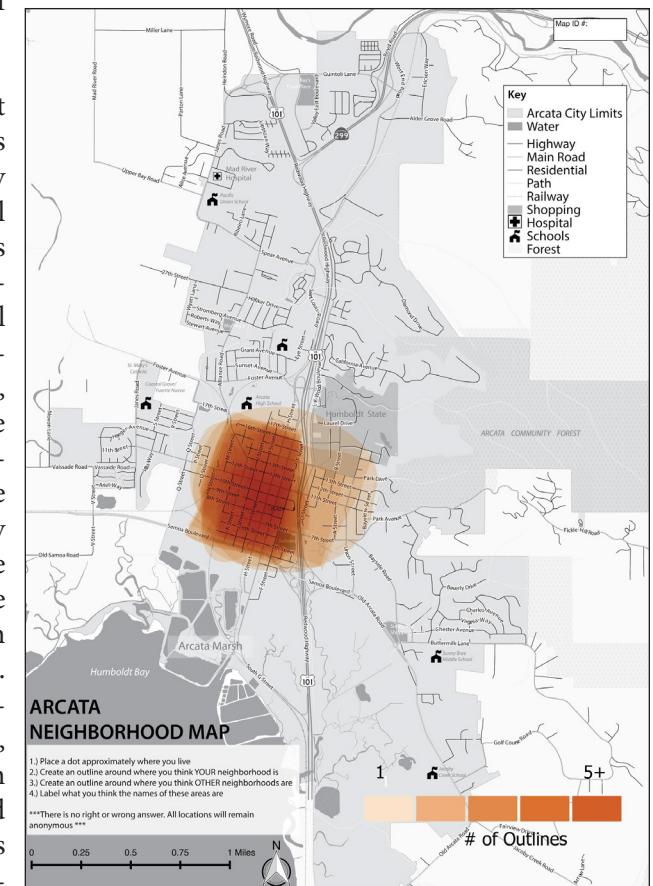


Figure 6.—Map showing the varying outlines for the Downtown neighborhood. (Nathaniel Douglass map)

ly, this portion of the town relies on a grid street pattern using numeric and alphabetic street names and the majority of these streets also appear as being part of the Downtown area in participant outlines. Looking at Figure 6, with the exception of three outlines, most participants agree that the Downtown area spans north to south from 17th Street to Samoa Boulevard and west to east from N Street to F Street. It is possible that many participants view the Downtown section as being only this specific portion of the grid street pattern due to the major highway that passes through the middle of the town, the railroad tracks that parallel the highway on the easternmost side of the town, and the busy Samoa Boulevard that runs east to west. These urban features may act as cultural dividing lines, where the landscape and resident perceptions change once crossed. In regard to the Sunny Brae area (Figure 8), multiple physical and urban landmarks were identified within the participants' agreed-upon boundaries. These landmarks include Sunny Brae Middle School, Sunny Brae Church, Sunny Brae Forest, Sunny Brae Animal Clinic, and the Sunny Brae Shopping Center. These organizations and well-known features contain the neighborhood's name, providing strong correlates in constructing a perceptive boundary

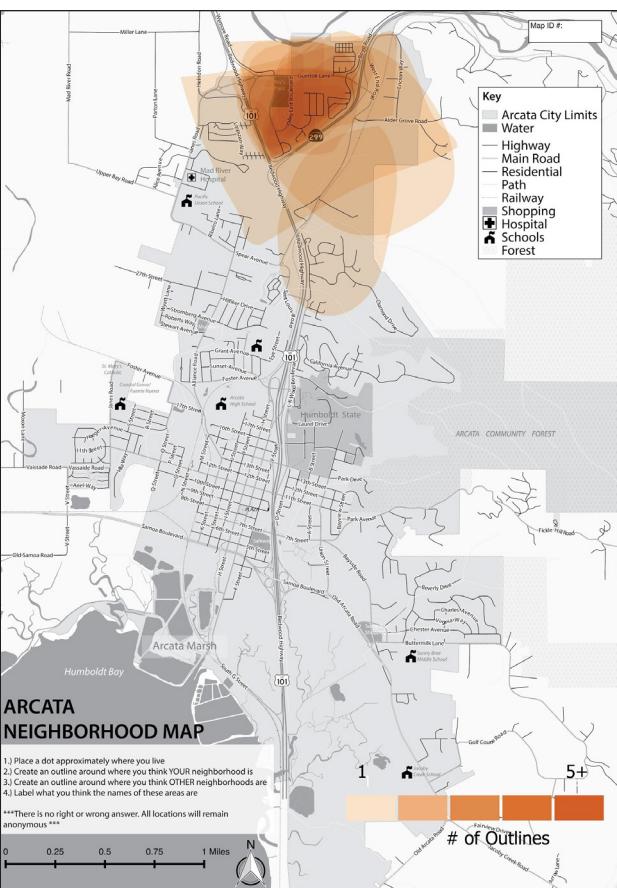


Figure 7.—Map showing the varying outlines for the Valley West neighborhood. (Nathaniel Douglass map)

for residents and influencing other local businesses to further define themselves based on the neighborhood's place name. This suggests that as businesses and services continue to incorporate the names of these vernacular landscapes, they will further encode and solidify where these boundaries begin and end, and how they are perceived by residents.

Neighborhood Perceptions

The final portion of the survey involved asking participants to list a series of descriptive words and phrases that best illustrate various neighborhoods. These phrases were categorized into positive, negative, and neutral connotations (Table 2). This classification immediately became a difficult task, as not all answers were overtly positive or negative. Rather, answers were subjective in their interpretation. For example, if a participant used remarks such as "community oriented," "expensive," and "rural" to describe the neighborhood, the first would be categorized as positive, the second remark would be negative, and the third remark, "rural," would be categorized as neutral since it was simply referring to characteristics of the physical environment. In most cases, categorizing phrases erred on the side of being neutral to ensure that the most accurate representation would be witnessed in how people perceived these areas.

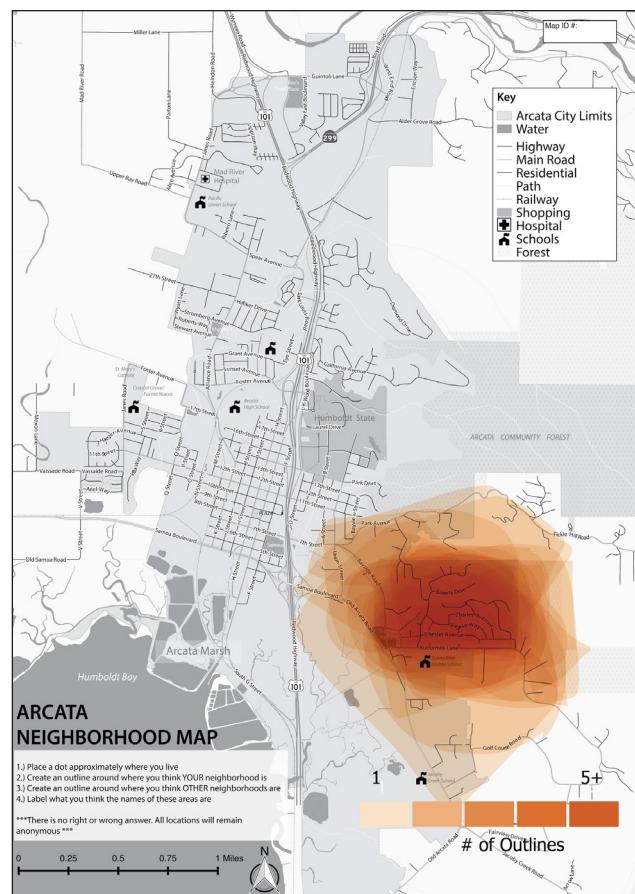


Figure 8.—Map showing the varying outlines for the "Sunny Brae" neighborhood. (Nathaniel Douglass map)

Table 2.—Examples of positive, negative, and neutral remarks given to describe some of the neighborhoods in Arcata.

Positive	Negative	Neutral
"Nice"	"Aggressive"	"Apartments"
"Lively"	"Noisy"	"West of Campus"
"Family Oriented"	"Homeless People"	"Steep Hills"
"Peaceful"	"Dirty"	"Rural"
	"Transient"	"Flat"
	"Cheap"	
	"Run Down"	

Four maps were produced from this classification showing neighborhoods with an equal number of positive and negative remarks (Figure 9): those with a higher number of neutral remarks (Figure 10), those with more negative remarks (Figure 11), and those with more positive remarks (Figure 12). The Downtown, Valley West, South Arcata, and Valley East areas were perceived more negatively, with the Downtown neighborhood receiving forty-five negative remarks, more than all other neighborhoods (Figure 5). It is important to mention that these maps do not take into account the ratio of positive to negative results. For example, while Downtown received forty-five negative remarks, it also received forty positive remarks, meaning that the Downtown area is almost as equally perceived positively as it is negatively. This was an interesting finding and could be attributed to a temporal dichotomy that is witnessed in between the day and night of the plaza and Downtown area. During the day, there are often events taking place and residents shopping at local businesses. The Arcata Farmer's Market resides in the heart of the town and can be, as many participants wrote, a "lively" and "friendly" place to be. However, this attitude changes at night when the local bars become the center of the neighborhood, attracting "transients" (i.e. impermanent residents that typically inhabit public spaces) and "aggressive activity." Similarly, the Valley West neighborhood was another instance of high negative comments with seventeen remarks and only three positive remarks. Many people commented on the economic and demographic characteristics of this neighborhood with remarks like "cheap," "fast food," "gross," and "white trash." This trend of negative comments could be explained by the presence of low-income housing, commercial businesses, fast food restaurants, and low-starred hotels in the Valley West area, factors that some consider to be undesirable in regard to a location.

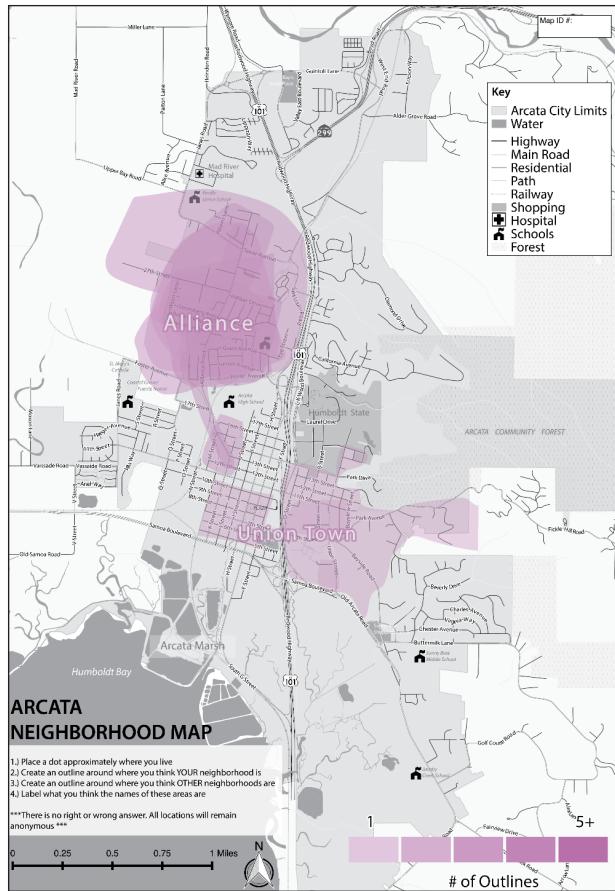


Figure 9.—Map of neighborhoods that received an equal number of positive and negative remarks. (Nathaniel Douglass map)

On the other end of the spectrum, fourteen neighborhoods received more positive remarks than negative remarks by participants. Of these neighborhoods, Sunny Brae received fifty-eight positive remarks, with fewer than ten negative remarks. Sunny Brae is a predominantly suburban area, with only a handful of businesses and a significant number of houses for student and non-student residents. With little connection to the busier Downtown area and less traffic passing through this section of the town, it is understandable why participants wrote phrases such as "family oriented," "peaceful," and "community" for Sunny Brae. These phrases were reiterated throughout many of the neighborhood descriptions. From this it can be posited that Arcata is seen as being more positively perceived by the participants than negatively (Figure 5).

A final map product was created that illustrates the participants' perceptions of Arcata as a whole. This was done by incorporating the perceptive data collected for each neighborhood and overlaying it all on a single basemap (Figure 13). Red outlines represent neighborhoods with more negative remarks made by participants, blue outlines represent predominantly positive re-

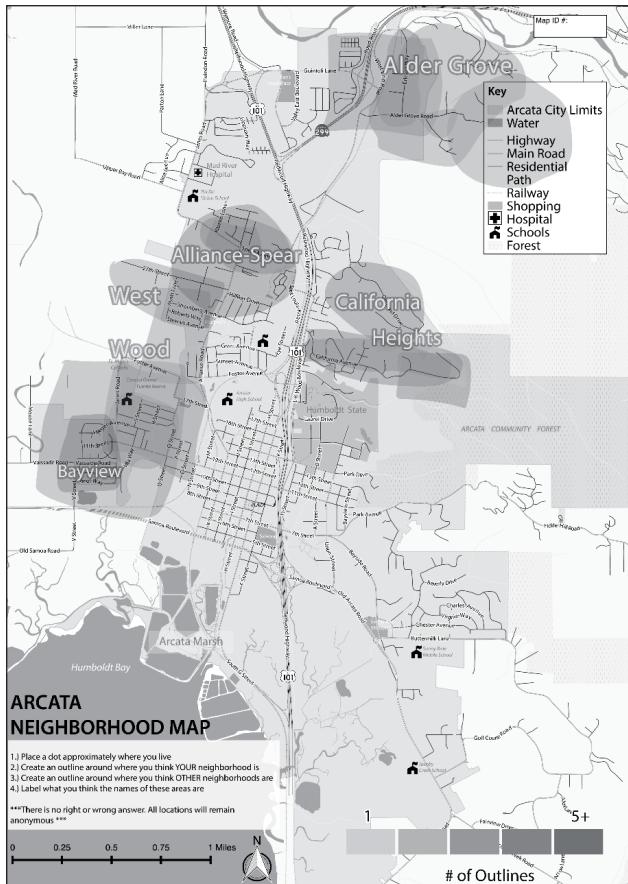


Figure 10.—Map of neighborhoods that received predominantly neutral remarks. (Nathaniel Douglass map)

marks, purple outlines represent an equal number of both positive and negative remarks, and grey outlines represent neighborhoods with more neutral remarks. In this representation, the lighter shades of each hue still represent less overlap in participants' answers during the mental-mapping portion of the survey. Darker shades in the center of each neighborhood don't necessarily represent areas that participants perceived as more negatively or more positively; rather, these outlines show

the varying consensus of neighborhood boundaries. Additionally, the map shows where varying boundaries collide and blend with one another and how these boundaries are hardly ever clean and/or neatly defined. This map presents a lens through which the complex image of Arcata neighborhoods can be visualized, where emotional perceptions are presented in a spatial manner.

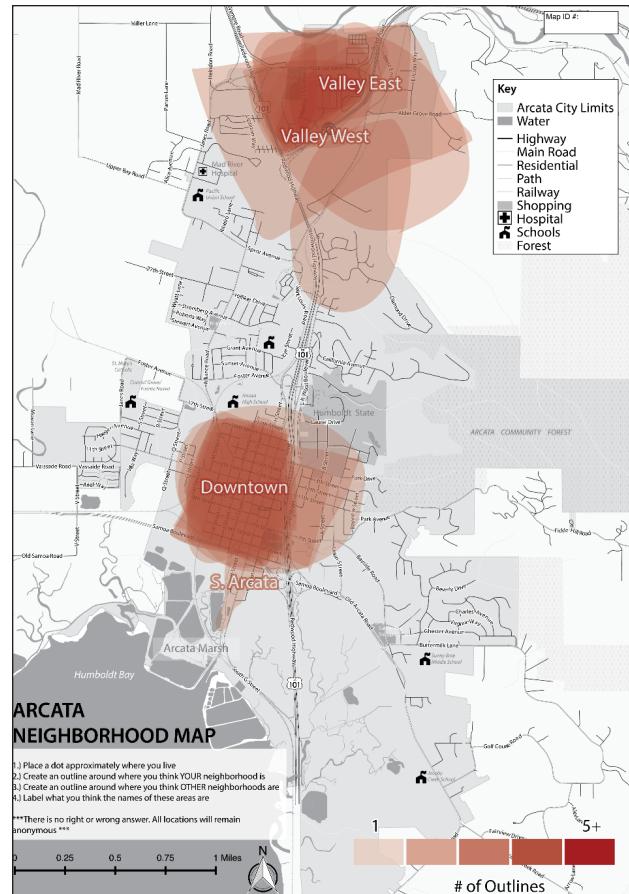


Figure 11.—Map of neighborhoods that received predominantly negative remarks. (Nathaniel Douglass map)

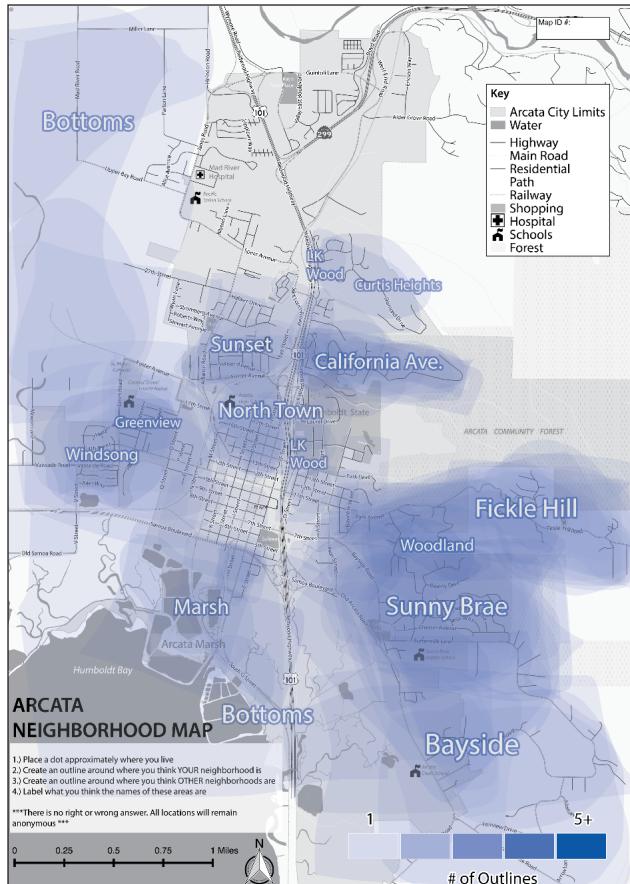


Figure 12.—Map of neighborhoods that received predominantly positive remarks. (Nathaniel Douglass map)

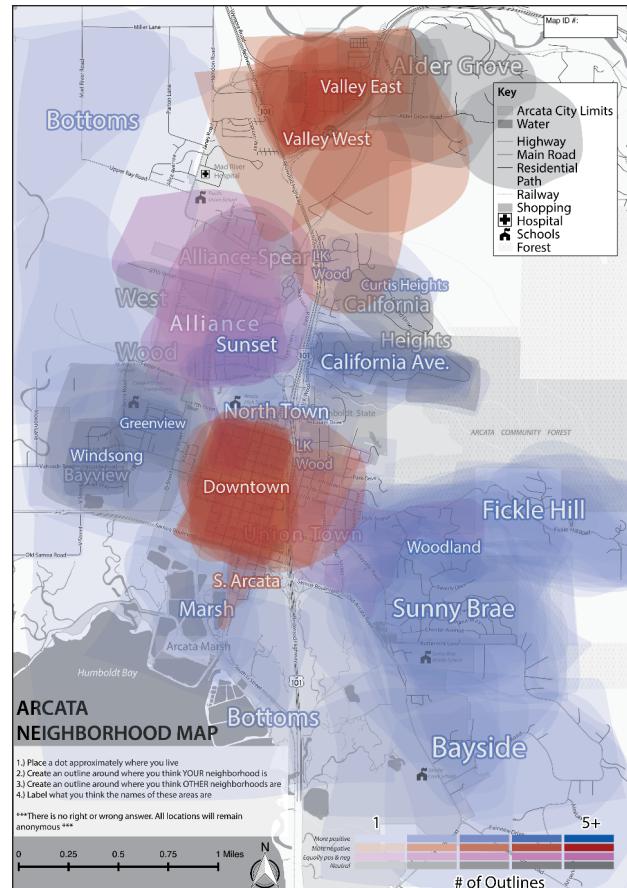


Figure 13.—Map compiling all neighborhoods and their perceptive rankings. (Nathaniel Douglass map)

Discussion

The findings from this research suggest that the use of a mental-mapping technique in which participants can draw individual spatial knowledge and perceptions onto a blank base map can be an effective tool to gather rich perceptual information and highlight discrepancies in the way many people think about and define neighborhood delineations. In addition to collecting qualitative spatial data that reaffirms the highly variant nature of neighborhood boundaries, the research also collected non-spatial data regarding emotional attitudes associated with certain demographics and quality of housing and residency. As Kitchen (1994) explains, cognitive maps are often utilized by residents to make informed decisions about their environment (1). The varying perceptions in each resident's mind paint an even more complex image of the city, in which each individual harbors specific judgments and emotional opinions toward particular spaces, thus influencing individual spatial behaviors and collective perceptions. Specifically, this research draws a direct link between spatial perception and attitudes, and we can begin to understand in more depth how resident perceptions influence behaviors such as which route to walk, which restaurant to eat at, which school to enroll a child at, or where to purchase a house.

As stated, twenty-nine additional neighborhoods were generated through the survey results. Forty-four percent of the neighborhood names recorded correspond to major street names present in the referenced neighborhood. This would suggest that residents associate vernacular names with neighborhoods based on primary streets they live on. For example, one participant highlighted significant streets that made up the neighborhood in question, in addition to outlining the neighborhood itself (Figure 4). While not all participants highlighted the roads within each neighborhood, many named and referenced neighborhoods using common street names, suggesting that the road network in the town dictates much of the cognitive mapping and vernacular naming done by citizens. Other features referenced in naming particular spaces included well-known local establishments (stores and markets) as well as the physical environment (notable creeks and the local marsh). Mental-mapping techniques like this can be used not only to locate spatial trends within an area, but also to formulate theories about how people visualize, name, and perceive spaces.

The research also found that despite the few instances of overwhelmingly negative perceptive remarks about the Downtown and Valley West areas, Arcata as a whole is perceived in mostly positive terms by its residents. While the goal of this research was to attempt to locate the boundaries of Arcata

neighborhoods, an additional significant finding is the range of individual responses given by participants. Creating a map that averaged out all of the overlapping boundaries would have muted the individual voices of the 104 people who took part in the mapping activity. Instead, this research focused on highlighting the individual differences and worked to create visualizations that amplified, rather than normalized, the unique voices and perceptions of the citizens of Arcata. The maps produced through this research provide a salient mental image of how Arcata is perceived through the eyes of some of its residents, where the borders are ambiguous and continuously overlap, and the spaces that harbor positive and negative associations. This research provides an opportunity to observe neighborhoods not as neatly bounded spaces, but as spatially fluid, socially contested, and perceptually rich.

Conclusion

This study extracted spatial data that not only aided in locating neighborhood boundaries in Arcata, but also illustrated an understanding of how these spaces are perceived by their residents. Neighborhoods are commonly depicted on maps as neatly defined spaces that end at defined borders. The primary issue with this depiction of neighborhood spaces is that it gives neighborhoods a sense of homogeneity and largely ignores the perceptions and experiences of the people living within these neighborhood spaces. Providing participants with a canvas to clearly articulate their individual perceptions of neighborhood spaces allows for the accumulation and encoding of a range of unique spatial information.

This study used an innovative participatory mapping technique that enabled Arcata citizens to define the geography of neighborhoods in the community and provide insight into the perceptions associated with them. Utilizing a simple base map for the mental-mapping exercise allowed participants to outline and highlight neighborhoods that were familiar to them. Utilizing a simple base map for the mental-mapping exercise allows participants to outline and highlight neighborhoods that were familiar to them. These maps were then scanned, georeferenced, and digitized in a GIS to create comparative map products that visualized the varying neighborhood boundaries of Arcata. Survey questionnaires helped acquire data pertaining to vernacular neighborhood names and perceptions by giving participants the opportunity to provide written neighborhood names and descriptive remarks on each. This data was categorized, logged, and visualized to create a collection of maps that show the perceptual and vernacular landscapes of Arcata.

This project provides a detailed method for conducting similar research in the future. Due to the sample of residents available, this research primarily focused on students who have lived in Arcata for less than five years. For a more-balanced residency sample, non-student residents who have lived in the area for more than five years should be in even proportion with that of student participants. Utilizing both quantitative and qualitative data collected from participants allowed for an in-depth study of spatial patterns regarding neighborhoods and their perceptive qualities.

The primary argument of this study was that neighborhoods have associated vernacular names, ambiguous boundaries, and distinct perceptual identities which are products of cognitive or mental maps created by the everyday citizen. The results of this research showed there to be (1) a disconnect between neighborhood names collected from government and corporate entities versus those listed by residents; (2) conflicting mental images as to where various boundaries start and end, reaffirming the highly variant nature of neighborhood boundaries; and (3) an even-more-complex image of the City of Arcata, in which each individual person harbors specific judgments and emotional perceptions toward certain neighborhoods, yet as a whole the city is more positively perceived by its residents. These results provide a deeper understanding of how cities, their boundaries, and the boundaries' associated vernacular names are shaped by residents and how the social construction of neighborhood spaces impact the attitudes and behaviors of residents. More importantly, understanding perceptions of neighborhood boundaries and how neighborhood spaces are defined and negotiated by citizens allows for greater empowerment and increased bottom-up decision making on issues such as housing policies, social services, and neighborhood safety by the people who occupy particular spaces. Additionally, this research shows that there is importance in understanding the citizen perceptions of neighborhood spaces in building stronger, inclusive, and more resilient communities moving forward.

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Appendix: Survey Questionnaire

Section 1.

1. What is your age range?

18–24

25–34

35–44

45+

2. Gender:

Female

Male

Other: _____

Prefer not to answer

3. What is your occupation?

Employed for wages

Self employed

Student

Retired

Other: _____

4. What town do you live in?

Arcata

Eureka

McKinleyville

Other: _____

5. How long have you lived in the area?

Less than 1 year

1–2 years

2–5 years

5–10 years

10+

Section 2. (Skip question 9 if you are NOT an Arcata resident)

6. Please take a minute to study the map attached, and attempt to locate your residence (Use colored dot)

7. Please locate and outline where you think the boundary of your neighborhood exists (Use same color outline)

8. What is the name that your neighborhood is most commonly referred to as?

9. Please locate and outline where you think the boundary of any other neighborhood exists (Use different colored outline)

Section 3. (Below is a list of common neighborhood names in Arcata)

10. Place an 'X' or cross out any neighborhood names you have NOT heard of before:

Aldergrove	Central LK Wood	Pacific Manor
Alliance	Curtis Heights	Southeast Eddy
Alliance-Spear	Downtown Arcata	Sunny Brae
Arcata Bottoms	Fickle Hill	Sunset
Bayside	Greenview	Uniontown
Bayview	Korblex	Valley West
Brookwood Drive	Marsh Commons	Westwood
California Avenue	Northtown	Windsong
California Heights	Pacific	Woodland Heights

11. After going through this list, could you locate and outline some of the similar sounding neighborhoods and their boundaries?

Yes

No

If no, why not?:

12. Please take a moment to return to the map and outline/ label anymore neighborhoods, after reviewing the list of names (**Use different colored outline**)

***Note: Only outline neighborhoods you feel capable of outlining. You are not being tested on your knowledge of these boundaries, nor are you obligated to define each one listed above**

Section 4.

13. Please write a few words or phrases that best describe some of the neighborhoods in Arcata. (If you live in Arcata, start with your neighborhood)

Neighborhood	Words or phrases
Ex: Your Neighborhood	"Energetic" "Family oriented" "Community" etc.

14. Do you have any additional comments for the researcher?

Navigating the Dual Financial Service System: Neighborhood-Level Predictors of Access to Brick-and-Mortar Financial Services

Ian M. Dunham

San Francisco State University

Alec Foster

University of Michigan

Steven Graves

California State University, Northridge

Michele Masucci

Temple University

Abstract

The availability of retail financial services in low-to-moderate income (LMI) neighborhoods remains a controversial topic, with significant underexplored questions about the potential presence of alternative financial service providers (AFSPs) and the absence of banks and credit unions (BCUs). In LMI neighborhoods across the United States, consumers regularly utilize AFSPs, including payday lenders, for basic financial transactions and services. This article addresses the geographic relationship between retail financial services locations, neighborhood-level demographic variables, and mortgage lending activity in three U.S. metropolitan study areas: Las Vegas, Nevada; Los Angeles, California; and Miami, Florida. The neighborhood-level predictors of the presence of both AFSPs and BCUs are examined at the Census-tract level using Ordinary Least Squares (OLS) and simultaneous autoregressive (SAR) statistical models. The results reveal that sociodemographic variables, including median household income and race/ethnicity, have a significant predictive relationship on AFSP location, even when controlling for spatial clustering.

Keywords: consumer finance, financial inclusion, financial services, payday lending, unbanked and underbanked households

Introduction

WHILE THE MAJORITY of Americans complete their basic financial transactions at banks and credit unions (BCUs) and maintain an ongoing relationship with these mainstream services, a significant number remain outside of the formal banking system (U.S. Federal Deposit Insurance Corporation

2016). Consumers operating outside of the formal banking system may be more likely to rely on cash instead of credit cards and checks, and may utilize informal, alternative financial service providers (AFSPs) for basic financial transactions and credit products (Friedline and Despard 2016; Friedline and Kepple 2017). The presence of brick-and-mortar AFSPs—including car title lenders, check cashing outlets, money transmitters, pawn shops, payday lenders, refund anticipation lenders, and rent-to-own establishments—in low-to-moderate income (LMI) neighborhoods remains a controversial topic (Caskey 1994; Graves 2003; Belsky and Calder 2005; Prager 2014; Barth, Hilliard, and Jahera 2015; Dunham and Foster 2015). At the same time, the potential absence of BCUs in LMI neighborhoods is also a concern (Smith, Smith, and Wackes 2008; Ergungor 2010; Morgan et al. 2016; Dahl and Franke 2017). While access to AFSPs may be beneficial in terms of convenience or assisting with emergency, short-term financial needs, concerns persist over the high prices charged by these establishments and other questions surrounding fairness (Caskey 2012; Friedline and Kepple 2017).

This article examines potential unevenness in retail financial service provider locations by neighborhood type. It is hypothesized that neighborhood-level demographic variables and mortgage lending activity have a predictive relationship on the locations of both AFSPs, in this case payday lenders, and BCUs. The analyses are carried out in three U.S. metropolitan study areas: Las Vegas, Nevada; Los Angeles, California; and Miami, Florida. Improving upon prior spatial analysis research, the presence of retail financial services is examined using Ordinary Least Squares (OLS) and simultaneous autoregressive (SAR) models to test predictive relationships. The results of the analyses reveal that sociodemographic variables, including median household income, race, and educational attainment, have a significant predictive relationship of both payday lender and BCU location, even after controlling for spatial autocorrelation. These findings bring attention to the issue of availability of financial services in LMI and minority neighborhoods and contribute to the discourse on economic inequality across metropolitan areas in the United States.

Literature Review

As a matter of public policy, financial inclusion is a term used to refer to a “state in which all working-age adults have effective access to credit, savings, payments, and insurance from formal service providers” (G20 Global Partnership for Financial Inclusion 2011, p. 1). Access to affordable financial products and services is a necessary condition for the successful asset-building strategies of LMI households (Barr and Blank 2011). Effective

access refers to the availability of safe and affordable financial products that are appropriate to the needs of consumers and also economically viable for the provider. Conversely, financial exclusion refers to a state whereby people lack access to financial services and instead rely on informal options, or options that have less-than-favorable terms (G20 Global Partnership for Financial Inclusion 2011). Still other definitions make a distinction between *access to* and *usage of* financial services (Kempson and Whyley 1999). Carbo, Gardener, and Molyneux (2005) extend the definition of financial exclusion to also consider self-exclusion and the reluctance of certain societal groups to engage with mainstream financial institutions for a variety of reasons. Access to financial services is not necessarily a predictor of actual utilization of these services (Demirguc-Kunt et al. 2014).

Addressing the domestic policy issue of financial exclusion, the U.S. Federal Deposit Insurance Corporation (FDIC) conducts the biennial *FDIC National Survey of Unbanked and Underbanked Households*. The 2015 survey collected responses from more than 36,000 households to provide estimates of the proportion of U.S. households that are unbanked, meaning they do not have an account at an insured institution, and the proportion that are underbanked, meaning they have a mainstream account, but also utilized an AFSP within the past twelve months. The survey finds that, in 2015, approximately 9 million U.S. households (made up of 15.6 million adults and 7.6 million children) were unbanked, while approximately 24.5 million U.S. households (made up of 51.1 million adults and 16.3 million children) were underbanked. These figures equate to approximately 7 percent and 19.9 percent of U.S. households, respectively (U.S. Federal Deposit Insurance Corporation 2016). The 2015 survey also finds that unbanked and underbanked rates are significantly higher in relatively lower-income households, less-educated households, younger households, Black and Latino households, and working-age disabled households.

Operating outside of the financial mainstream may be detrimental to the long-term financial stability of unbanked and underbanked households for a number of reasons. Reliance upon AFSPs possibly represents a financial burden to users because the price of services offered by AFSPs is likely higher than comparable services offered at mainstream BCUs (Cover, Fuhrman, and Garshick 2011). Absolute reliance on AFSPs may discourage the beneficial financial outcomes that are associated with maintaining a relationship with a BCU, and AFSP users lack the consumer protections that are in place at mainstream BCUs. Furthermore, consumers may be less likely to build a positive credit history, which may impede their ability to acquire a loan at

reasonable rates, for example to make investments in education or homeownership (U.S. Federal Deposit Insurance Corporation 2016).

Check cashing outlets are brick-and-mortar storefronts that primarily cash checks for a small fee. Some reasons that patrons may choose to utilize such services include cultural sensitivity and multilingual tellers, convenient locations, and a wide range of product offerings beyond check cashing (Dove Consulting 2000; Andre and Associates 2001; Kim 2001). Payday loans are typically made for \$500 USD or less and require a borrower to have a bank account and a guaranteed source of income through a job or government support program that can be verified (Gallmeyer and Roberts 2009).

While payday lenders may serve a legitimate purpose in helping borrowers meet short-term credit needs, payday loans carry high interest rates and have other features that may be less than ideal for borrowers. Payday loans carry an annualized interest rate that may be more than ten times that of a credit card (Bhutta 2014). Expressed as an annual percentage rate (APR), payday loan interest rates may be between 400 to 1,000 percent (Graves 2003; Caskey 2012). These loans can serve to trap borrowers in a cycle of debt (Stegman and Faris 2003). If a borrower is unable to pay off the loan within the specified time period, the payday lender may either deposit the borrower's original check that was offered as collateral, or renew the loan with additional interest and extension fees. The second option is referred to as a rollover. If the check is deposited, the borrower may be faced with the cost of a bounced check, and if a rollover occurs, the borrower may be faced with additional fees and interest that are prohibitive to repayment (Huckstep 2003). McGill and Monast (2006) estimate that 91 percent of payday loans are taken out by repeat borrowers. This suggests that payday loans are not only being used for emergencies, but as a strategy to meet routine expenditures.

Currently, thirty-two states allow payday lending to be carried out in check-cashing storefronts, with regulations on payday lending varying widely by state. At the federal level, there have been recent efforts to regulate the industry. In October 2017, the U.S. Consumer Financial Protection Bureau (CFPB) released their final rule on small dollar lending, which establishes consumer protections for certain consumer credit products, including requiring lenders to determine upfront whether customers can afford to repay their loans and other protections (U.S. Consumer Financial Protection Bureau, 2017).

LMI neighborhoods in the United States have a history defined by financial exclusion, including redlining that was addressed by the federal govern-

ment during the Civil Rights Era (Squires 1992; Denton 1996), and also reverse-redlining and targeting in the form of subprime and predatory mortgage lending leading up to the financial crisis of 2007–08 (Apgar and Calder 2005; Immergluck and Smith 2005; Darden and Wyly 2013). More theoretically informed scholarship views the landscape of consumer finance options as the observable result of larger market changes and an evolving social contract that serves to transfer the responsibility for financial security from the state to the individual citizen (Carbo, Gardener, and Molyneux 2005; Leyshon, French, and Signoretta 2008). Clark (2014) notes a growing importance and influence of finance in everyday life, requiring ever-greater individual-level financial literacy to navigate an increasingly complex landscape of financial services. These and other forces have led to an increasingly bifurcated, two-tiered (Squires and O'Connor 1998) or dual (Belsky and Calder 2005) financial service system, whereby different segments of society are served with different types of financial products and services.

Prior Spatial Analysis Studies

An overriding question in the existing research on retail financial markets is whether location decisions are driven purely by economic considerations, or whether other factors come into play. The concept of financial exclusion was forwarded as a geographic phenomenon to address bank branch closures in low-income wards in the United Kingdom during the 1990s (Leyshon and Thrift 1993, 1995), and later expanded to refer to constrained access of individuals to mainstream financial services (Kempson and Whyley 1999). The concept of banking deserts refers to areas that have been abandoned by mainstream financial services (Thrift and Leyshon 1997). Existing geographic studies raise concerns that the prevalence of AFSPs and absence of BCUs in LMI and minority urban neighborhoods is not only a sign of economic distress in these neighborhoods, but also may present an ideal climate for predatory financial practices to occur (Karger 2005; Cover, Fuhrman, and Garshick 2011). Gallmeyer and Roberts (2009) argue that payday lending locations function as both an indicator and an exacerbating factor of community economic distress. Much of the ongoing research relies on the premise that the spatial organization of payday lenders may influence the potential risks to certain demographics of consumers who use their services (Stegman and Faris 2003).

A number of studies test the hypothesis that AFSPs are disproportionately located in low-and moderate-income neighborhoods and in areas that have comparatively higher percentages of minority residents. The rapid expansion of the AFSP industry in the 1990s, and the proliferation of the payday lend-

ing industry in particular, sparked research about the spatial distribution of AFSPs. Caskey (1994) uses the term “fringe banks” to describe money-service businesses (check cashers, pawnshops, and payday lenders) that operate outside of the realm of mainstream banking. He introduces a number of empirical methods, including regression analysis, to address the possible higher-than-average prevalence of AFSPs in low-income neighborhoods.

Technological advances in geographic information systems (GIS) have enhanced the ability of researchers to analyze spatial relationships. Graves (2003) gathers payday lender and bank location data in seven metropolitan areas in Louisiana and Illinois to analyze the relationship between locations and socioeconomic indicators. Examining the characteristics of neighborhoods within a quarter mile of payday lenders, Graves finds that payday lenders are disproportionately located in Census block groups with a higher percentage of poor and minority (primarily Black) residents. The study also finds that neighborhoods in near proximity to payday lenders are served by fewer bank branches.

Burkey and Simkins (2004) analyze payday lender locations in North Carolina and seek to reveal the factors that make a geographic area likely to attract this type of service. Using multivariate regression analysis, the authors relate the number of payday lenders to a number of independent socioeconomic and demographic variables within ZIP Codes. The authors conclude that payday lenders tend to locate in urban areas with relatively higher minority concentrations, younger populations, lower median incomes, and areas where individuals have comparatively lower levels of education. The authors also find that race is a powerful predictor of the locations of payday lenders in North Carolina, even after controlling for income, “urban-ness,” income inequality, and average educational levels. Specifically, the regression analysis reveals a statistically significant positive relationship between an increasing percentage of Black residents and the number of payday lenders within a ZIP Code. Additionally, ZIP Codes with higher densities of payday lenders are found to have higher concentrations of recent immigrants (Burkey and Simkins 2004). Immigrant communities may offer a potentially lucrative market for payday lenders because of barriers to traditional banking and the precarious financial situation of many immigrants. (Caskey 1994; Gallmeyer and Roberts 2009).

A study authored by Sawyer and Temkin (2004) for the now-defunct Fannie Mae Foundation addresses whether AFSPs are disproportionately located in minority and low-income neighborhoods, and investigates the prevalence

of mainstream financial institutions as compared to the concentration of AFSPs (check cashing outlets, payday lenders, and pawnshops) in eight metropolitan counties across the nation. The study areas are Cook County, Illinois (Chicago); Fulton County, Georgia (Atlanta); Harris County, Texas (Houston); Jackson County, Missouri (Kansas City); Los Angeles County, California; Miami-Dade County, Florida; Shelby County, Tennessee (Memphis); and Washington, D.C. Using Census tract-level data, the authors find that AFSPs are disproportionately located in minority and low-income neighborhoods in seven of the eight study areas. AFSPs are found to cluster in neighborhoods that are disproportionately Latino in all eight sites, but AFSPs are clustered disproportionately in Black neighborhoods in only two of the study areas (Sawyer and Temkin 2004).

Oron (2006) examines the relations between demographic variables (race, income, education, and the percentage of the local population employed by the military) and the geographic distribution of payday lending storefronts at the ZIP Code level for the entire state of Washington. The percentage of the population that is Black is found to be a statistically significant predictor of the number of payday lenders in a given ZIP Code. Payday businesses are found to be located more frequently in Black population centers by a factor of almost two after adjusting for population size, as well as economic and educational factors. Oron concludes that payday lenders are located in localities with a high percentage of Black residents. In addition to race, a strong relationship between payday lenders and ZIP Codes that have comparatively higher rates of poverty and lower rates of education is observed. Oron also finds that there are fewer bank branches on a per capita basis in Black population centers when compared with the rest of the state, and that bank branch location is positively associated with income and ZIP Codes having a large proportion of full college-degree holders.

Further incorporating spatial regression to analyze predictors of AFSP location, Damar (2009) examines the predictors of the locations of payday lenders in Oregon from 2002 to 2004. Using fixed-effects logit regressions of ZIP Code data, the author finds that payday lenders are more likely to locate in ZIP Codes that have comparatively more bank branches, larger populations, and higher percentages of Latinos. In regards to the relationship between AFSPs and mainstream financial institutions, the results of the analysis suggest that payday lenders are locating in areas already being served by banks.

Gallmeyer and Roberts (2009) use GIS and multivariate logistic regression to examine the interaction between payday lending locations and socio-economic variables across the Front Range communities of Colorado. The authors identify distinct patterns in the socioeconomic characteristics of communities that host payday lenders. Specifically, their results indicate that race/ethnicity, immigration, income, poverty, age groups, and military personnel concentration all affect the likelihood of payday lending locating in a neighborhood. Age is another factor that the authors address as a potential predictor of the presence of payday lenders. The authors also note that elderly populations may potentially be popular locations for payday lenders.

Cover, Fuhrman, and Garshick (2011) use GIS and multiple regression to examine AFSPs (including payday lenders, check cashers, pawn brokers, and money transmittal companies) in four small-to-moderate-sized metropolitan areas: Boise-Nampa, Idaho; Yakima, Washington; Rapid City, South Dakota; and Waterloo-Cedar Falls, Iowa. Testing whether AFSPs are more geographically accessible to predominantly minority neighborhoods, the authors find that, while market factors including zoning are powerful predictors of fringe bank locations, race/ethnicity is a strong predictor of location in two of the four study areas.

Dunham and Foster (2015) examine the prevalence of ASPs and BCUs in neighborhoods across southeastern Pennsylvania. Using spatial regression analyses, they find that AFSPs are disproportionately located in close proximity to neighborhoods with comparatively lower levels of educational attainment and higher rates of subprime mortgage lending. Conversely, they find that BCUs are disproportionately located in close proximity to neighborhoods with comparatively higher levels of median household income and educational attainment, and a lower percentage of black residents.

Building on the aforementioned research, this study examines neighborhood (Census tract)-level data across three metropolitan areas. A method is developed to calculate the mean distance between Census tracts and both AFSPs and BCUs. In addition to OLS analysis, this study incorporates SAR models to account for spatial autocorrelation, which has become an increasingly common practice in spatial analysis. Finally, in addition to sociodemographic variables, this study incorporates mortgage lending variables to provide a nuanced examination of how actual financial outcomes, not just sociodemographic variables, predict AFSP and BCU location.

Study Areas

This research examines Census tract-level data across three metropolitan areas. Las Vegas, Nevada; Los Angeles, California; and Miami, Florida were chosen because they are places that have experienced comparatively higher-than-average rates of subprime lending (Mayer and Pence 2008), higher rates of mortgage foreclosure (RealtyTrac 2009), and greater declines in property values after the subprime mortgage crisis of 2008 (Pew Charitable Trusts 2013). These cities also have relatively high levels of income inequality as measured by Gini coefficient. Of the twenty-five most populous counties in the nation, Miami-Dade County has a Gini coefficient of 0.503, making it the second-most income-unequal county behind only New York County (Manhattan). The Gini coefficient in Los Angeles County is 0.489, the sixth highest in the nation. The Gini coefficient of Las Vegas is 0.434, making it the twenty-first highest in the nation (U.S. Census Bureau 2012).

The Las Vegas metropolitan area is comprised of Clark County only. According to the U.S. Census Bureau, Clark County has a combined population of 2,000,759 (U.S. Census Bureau 2014). As of 2010, 62 percent of the residents of Clark County identify as White, 32 percent as Latino, 11 percent as Black, and 6 percent identify as Asian. The population of Clark County increased by an estimated 22 percent between 2000 and 2010; and increased by 85 percent between 1990 and 2000. This growth places Clark County among the fastest-growing counties in the nation (U.S. Census Bureau 2014).

The Los Angeles metropolitan area, consisting of Los Angeles and Orange Counties, is the second largest U.S. metropolitan area in terms of population. The two counties have a combined population of 13,052,921. Los Angeles has a population of 9,819,000, making it the most populous single county in the nation. The population of Los Angeles increased by 3 percent between 2000 and 2010 (U.S. Census Bureau 2014). As of 2010, 50 percent of the residents of Los Angeles County identify as White, 48 percent as Latino, 11 percent as Asian, and 10 percent as Black (U.S. Census Bureau 2014).

The Miami metropolitan area is comprised of Miami-Dade, Broward, and Palm Beach Counties. The three counties have a combined population of 5,762,717. Miami-Dade County alone has a population of 2,496,435. The population of Miami-Dade County increased by 11 percent between 2000 and 2010 (U.S. Census Bureau 2014). As of 2010, 74 percent of the residents of Miami-Dade County identify as White, 65 percent as Latino, 19 percent as Black, and 1 percent as Asian (U.S. Census Bureau 2014).

Data and Methods

To understand the spatial distribution of financial service providers, the locations of both payday lenders and BCUs were geocoded using GIS. Payday lender location was gathered using official state documentation acquired from the respective regulatory authorities in each state. Random spot checking of the data was completed by reviewing telephone books to ensure some measure of accuracy. BCU branch address data was gathered from the FDIC Summary of Deposits (U.S. Federal Deposit Insurance Corporation 2015) and geocoded using ArcGIS. Figures 1, 2, and 3 display the geographic distribution of BCU and AFSP locations in Las Vegas, Los Angeles, and Miami, respectively.

A value for distance was developed as follows. Euclidian distance between each Census tract in the study area and the nearest payday lender and BCU locations was calculated by creating a raster shapefile of each study area with 10m² cell resolution. A zonal statistics function was performed to calculate a measure of mean distance between the nearest payday lender location and every individual raster cell in each Census tract. The distance measure for each individual cell in the Census tract was then averaged, which provided a distance value for each Census tract. The same steps were completed to calculate a mean distance value of BCU location for each Census tract. These distance measures were then log transformed in order to reach a normal distribution. This resulted in a continuous variable suitable for regression analysis. The distance figures, distance to the nearest AFSP and to the nearest BCU, serve as the dependent variable in each set of analyses.

Demographic variables and 2010 Census tract boundaries were acquired from 2010 Census data. The choice of independent variables was informed by prior studies discussed in the literature review and include the following: population density, median household income, percentage of the population that is Black, percentage of the population that is Latino, percentage of the population that is Asian, percentage of the population that is age sixty-five or above, and percentage of the population age twenty-five and above that hold a high-school diploma. In cases where Census tracts did not have residents, they were omitted from the regression analysis.

Data on 2006 rates of mortgage lending were acquired from Home Mortgage Disclosure Act (HMDA) data made available by the Urban Institute (Urban Institute 2013).¹ Two mortgage variables are included in the analyses. Mortgage credit denial refers to when an individual applies for and is denied a mortgage. Subprime home purchase loans occur when a borrower acquires a

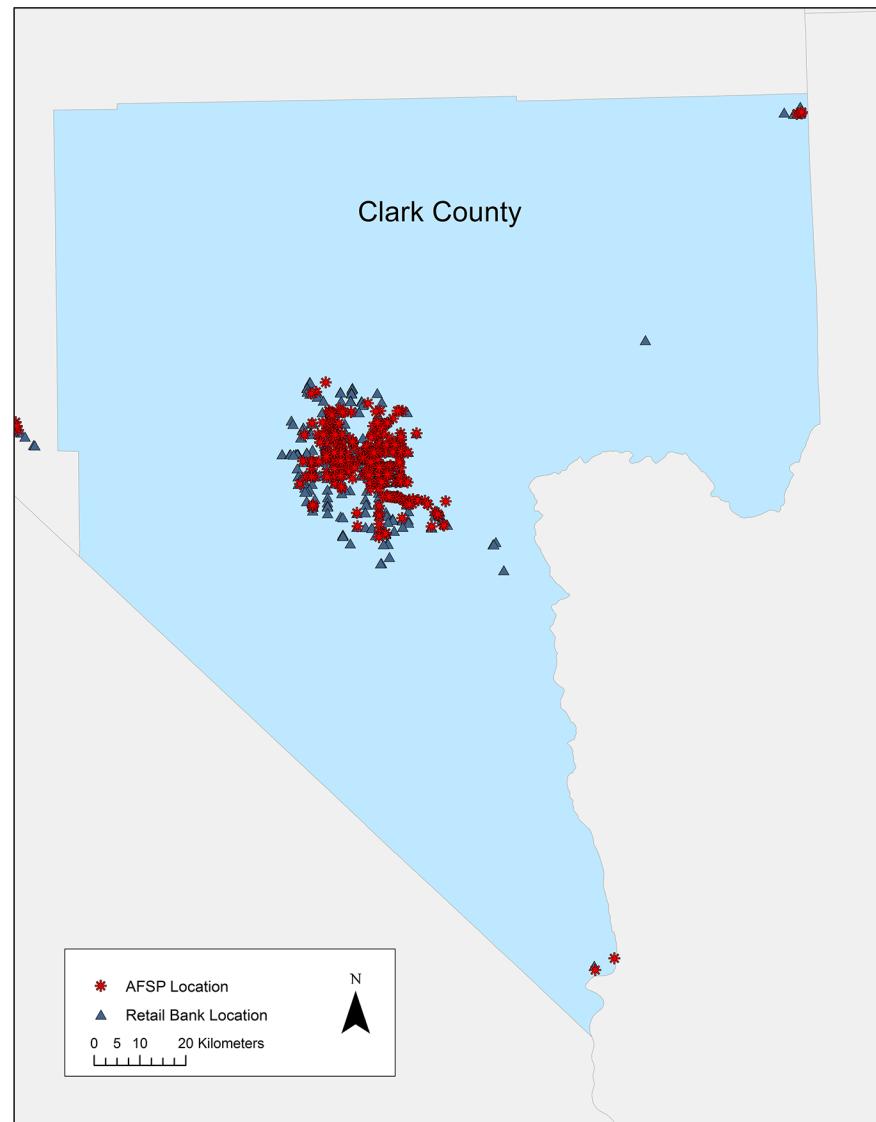


Figure 1.—Las Vegas Study Area AFSP and Bank Locations (Clark County, Nevada).

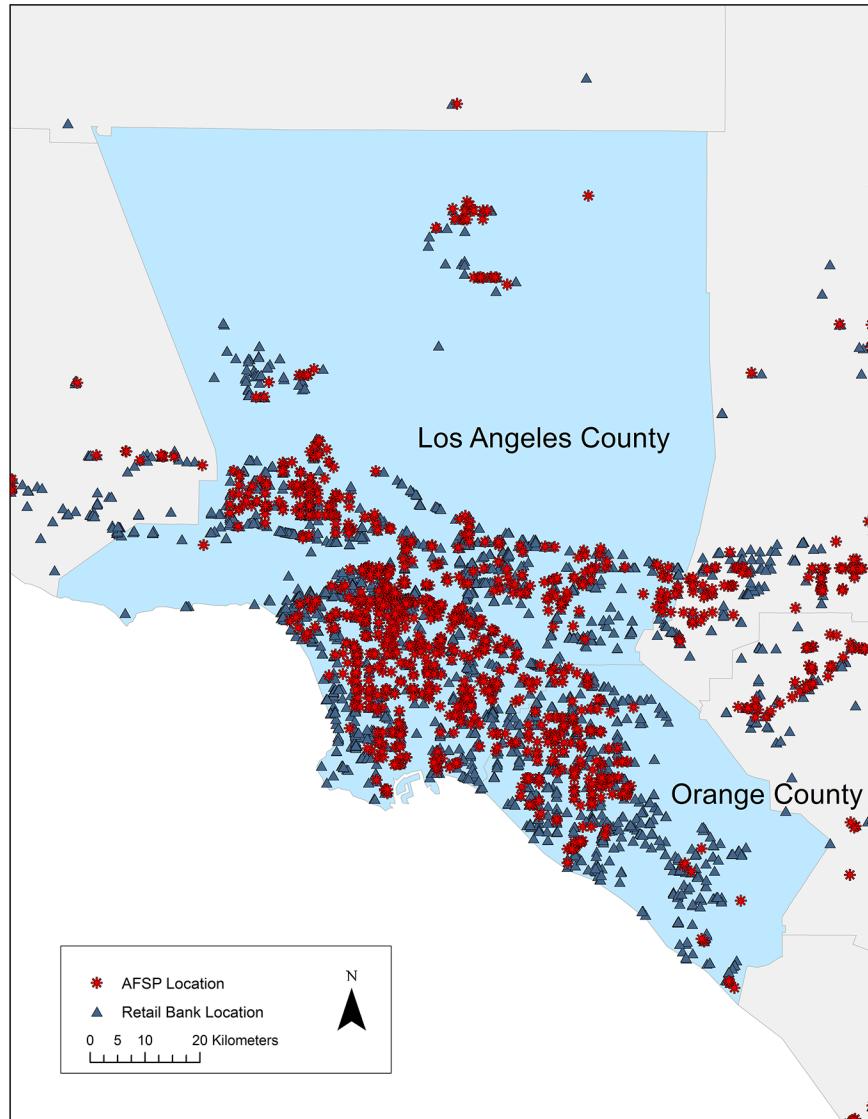


Figure 2.—Los Angeles Study Area AFSP and Bank Locations (Los Angeles and Orange Counties).

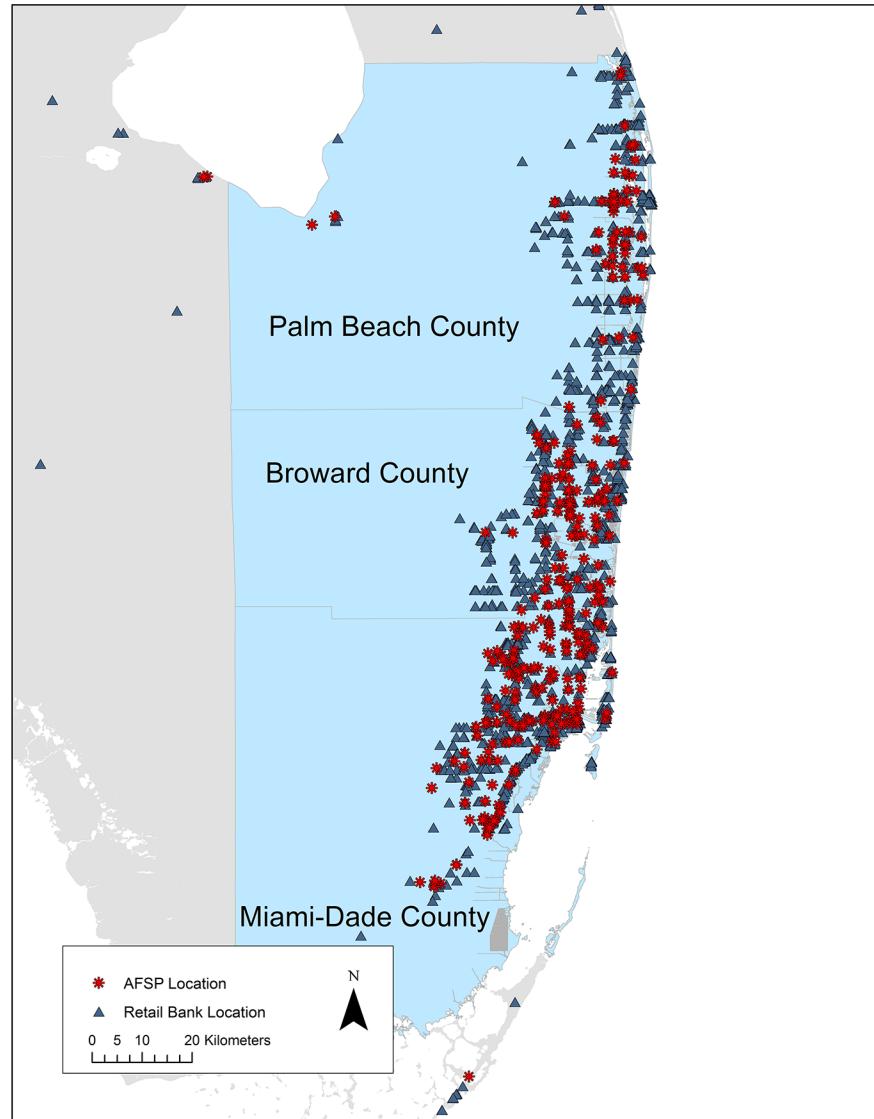


Figure 3.—Miami Study Area AFSP and Bank Locations (Miami-Dade, Broward, and Palm Beach Counties).

loan that is classified as subprime. The variables were converted into a raster grid and a “Zonal Statistics” function was performed in order to aggregate them at the 2010 Census tract level. Table 1 displays the descriptive statistics for Las Vegas, Los Angeles, and Miami, respectively.

Table 1.—Descriptive Statistics: Mean Values for all Study Areas.

Variable	Las Vegas		Los Angeles		Miami	
	Mean	SD	Mean	SD	Mean	SD
Log of AFSP Distance	2.56	0.92	2.42	0.83	2.69	0.73
Log of Bank Distance	2.39	0.72	2.18	0.63	2.16	0.59
Population Density	2,404	1,536	4,693	4,018	2,578	2,194
Median Household Income	57,467	21,887	64,829	31,283	53,959	26,325
Percent Black	10.18	8.89	7.07	12.41	20.02	25.67
Percent Latino	28.46	19.77	44.07	29.32	38.18	29.84
Percent Asian	8.23	7	14.36	15.51	2.14	2.57
Percent Age 65 Plus	12.61	10.47	11.52	6.55	18.38	15.1
Percent 25 Plus HS Diploma	82.95	13.79	76.46	18.65	83.65	12.13
Pct Mortgage Purchase Denial	22.82	7.32	26.56	10.08	27.01	7.46
Pct Subprime Mortgage Purchase	17.9	9.84	23.98	15.91	25.17	13.53
Number of Tracts (N)	487		2928		1219	

Multivariate spatial regression modeling is utilized to analyze the relationship between the distance to each type of service and Census tract demographics. First, OLS is carried out for each metropolitan area. The basic multivariate OLS model may be represented as:

$$y = \alpha + \sum \beta k x_k + e$$

where y equals the estimated Census tract-level log Euclidian distance, α equals the intercept (constant), x represents each independent variable, k equals the number of independent variables included in the model, and e represents the random error term. Results were checked for multicollinearity, outliers, influential observations, and regression assumptions.

SAR modeling is then applied to examine the predictors of payday lender and BCU location. This process accounts for spatial clustering or autocorrelation that violates OLS assumptions of random, independent observation and errors (Chakraborty 2011). Tests were performed to detect spatial autocorrelation using the queen contiguity-based method for defining the spatial weights matrix. The Moran's I statistic, the standard measure of spatial clustering, reveals statistically significant, positive spatial autocorrelation for all of the models. Generally, there are two ways to incorporate spatial autocorrelation into regression models, with spatial error models associating the autocorrelation with the error term and spatial lag models associating it with the dependent variable (Chakraborty 2011). The Robust Lagrange Multiplier statistic was used to determine between spatial error and lag models (Chakraborty 2011), and as this statistic was higher for the spatial lag for all of the OLS regression models, spatial lag models were constructed to address spatial autocorrelation. The spatial lag model may be represented as:

$$y = \alpha + \sum \beta k x_k + \rho W y + u$$

where (ρW) is a term for the spatial autoregressive coefficient (lag parameter) applied to the dependent variable (y).

Results

The first sets of results are descriptive in nature. Table 2 summarizes the findings on the number of payday lender and BCU branches in the study areas. The Las Vegas MSA has a total of 302 payday lender locations, and a population of more than 2 million people, which equates to 1.51 locations per resident. With 372 BCU branches, there are 1.86 bank branches for every 10,000 residents. The Los Angeles MSA has a total of 915 payday lender locations and a population of more than 13 million people, which equals 0.7 locations per resident. The Los Angeles MSA includes 2,498 BCU branches, or 1.91 bank branches for every 10,000 residents. The Miami MSA has 347 payday lender locations with a population of nearly 6 million, or 0.6 locations per 10,000 residents. The Miami MSA has 1,655 BCU branches, or 2.87 branches per resident. In summary, Miami has the greatest number of BCU branches per person, while Las Vegas has the greatest number of AFSP branches per person.

Table 2.—Summary of Retail Financial Service Locations in Study Areas.

Variable	Las Vegas (Clark County)	Los Angeles (Los Angeles and Orange Counties)	Miami (Miami-Dade, Broward, and Palm Beach Counties)
Total Population	2,000,759	13,052,921	5,762,717
FDIC-Insured Bank Branches	372	2,498	1,655
Bank Branches per 10,000 people	1.86	1.91	2.87
AFSP Branches	302	915	347
AFSPS per 10,000 people	1.51	0.7	0.6

The OLS models predicting distance to a payday lender and distance to a BCU were all statistically significant. Moving to the spatial lag model improved model fit, although the number of explanatory variables that are statistically significant decreased in all models. The Aikake's Information Criterion is lower and the r-squared is higher for all of the four models, suggesting that the SAR results represent an improvement over the traditional OLS method. The results of the SAR analysis are therefore the primary focus of this study. The results of the OLS model predicting the log Euclidian distance to AFSPs are displayed in Table 3. The results of the OLS model predicting the log Euclidian distance to BCUs are displayed in Table 4.

Table 3.—Ordinary Least Squares (OLS) Models Predicting Distance to an AFSP.

Variable AFSP Distance	Las Vegas	Los Angeles	Miami
Population Density	-0.314***	-0.323***	-0.304***
Median Household Income	0.17***	0.287***	0.29***
Percent Black	-0.004	-0.107***	-0.053
Percent Latino	-0.275***	-0.342***	-0.09**
Percent Asian	-0.021	-0.051***	0.015
Percent Age 65 Plus	-0.152***	-0.071***	0.017
Percent 25 Plus HS Diploma	-0.191**	-0.137***	-0.034
Percent Mortgage Purchase Denial	-0.23***	-0.01	-0.12***
Percent Subprime Mortgage Purchase	-0.132***	-0.072***	-0.081**
Adjusted r-squared	0.41	0.234	0.379
F	38.46	288.89	82.56
Moran's I (Queen)	20.27	60.333	32.738
Akaike's Information Criterion	527.67	2508.21	1051.32
Lagrange Multiplier (lag)	570.955	3140.296	1218.028
Robust Lagrange Multiplier (lag)	148.338	339.124	205.541
Lagrange Multiplier (error)	424.878	2934.163	1032.779
Robust Lagrange Multiplier (error)	2.26	132.991	20.292

Note: ***=p<.01, **=p<.05, *=p<.1

Table 4.—Ordinary Least Squares (OLS) Models Predicting Distance to a BCU.

Variable Bank Distance	Las Vegas	Los Angeles	Miami
Population Density	-0.462***	-0.393***	-0.447***
Median Household Income	0.104*	0.294***	0.216***
Percent Black	-0.022	0.098***	0.094**
Percent Latino	-0.178*	0.061	-0.055
Percent Asian	-0.06	-0.123***	-0.045*
Percent Age 65 Plus	-0.214***	-0.099***	-0.053*
Percent 25 Plus HS Diploma	-0.395***	-0.176***	-0.147***
Percent Mortgage Purchase Denial	-0.15***	0.025	-0.063**
Percent Subprime Mortgage Purchase	-0.085*	0.044**	0.105***
Adjusted r-squared	0.25	0.1	0.28
F	18.92	107.51	52.29
Moran's I (Queen)	23.21	55.26	33.21
Akaike's Information Criterion	508.89	3024.93	955.11
Lagrange Multiplier (lag)	549.67	2069.33	1229
Robust Lagrange Multiplier (lag)	83.38	144.75	201.51
Lagrange Multiplier (error)	497.01	1980.86	1065.31
Robust Lagrange Multiplier (error)	30.72	56.28	37.82

Note: ***=p<.01, **=p<.05, *=p<.1

Table 5 displays the results of the SAR analyses examining AFSP location. The dependent variable is distance to a payday lender. Population density is a statistically significant predictor in all three study areas. This indicates that payday lenders are more likely to locate in more-densely populated areas. Median household income is also a statistically significant predictor of distance to a payday lender in all three study areas. Median household income has a positive relationship, which indicates that, as income increases, distance to a payday lender also increases.

In terms of race, the percentage of the population that is Black has a statistically significant negative relationship in Miami. This suggests that the percentage of the population that is Black decreases as distance to a payday lender increases. Percent Latino is statistically significant with negative signs in Los Angeles and Miami, indicating that increasing percentages of Latinos predicts nearness to a payday lender. Percent of the population that

is age twenty-five and greater and hold a high-school diploma is found to be statistically significant across all three study areas, with a negative sign, which suggests that lower education levels are associated with nearness to a payday lender.

The results on mortgage lending activity are as follows. The percentage of mortgage applications that were denied is statistically significant with a negative sign in Las Vegas, which suggests that mortgage denial increases as nearness increases. The results are inverse in Los Angeles, suggesting that mortgage denial predicts greater distance. The percentage of mortgages made that were subprime is statistically significant with a negative sign in Los Angeles, suggesting that increased rates of subprime lending are a predictor of nearness to a payday lender.

Table 5.—Simultaneous Autoregressive (SAR) Models Predicting Distance to an AFSP.

Variable	Las Vegas	Los Angeles	Miami
Population Density	-0.00006***	-0.00002***	-0.00004***
Median Household Income	0.000002*	0.000002***	0.000002***
Percent Black	0.001	-0.001	-0.002***
Percent Latino	-0.003	-0.001***	-0.002**
Percent Asian	0.0003	0.0004	-0.006
Percent Age 65 Plus	-0.003	-0.001*	-0.001
Percent 25 Plus HS Diploma	-0.006*	-0.002***	-0.003***
Percent Mortgage Purchase Denial	-0.005*	0.001**	-0.002
Percent Subprime Mortgage Purchase	-0.0009	-0.002***	-0.00003
r-squared	0.835	0.838	0.798
Log Likelihood	-252.84	-1243.1	-514.66
Akaike's Information Criterion	527.67	2508.21	1051.32

Note: ***=p<.01, **=p<.05, *=p<.1

Table 6 displays the results of the SAR analyses testing the relationship between BCU distance and socioeconomic indicators and mortgage lending activity. The dependent variable is distance to a BCU. Population density is a statistically significant predictor in all three study areas, indicating that BCUs are more likely to locate in more-densely populated areas. Median

household income is a statistically significant predictor of distance to a BCU in Los Angeles and Miami, but not in Las Vegas. Median household income has a positive relationship in Los Angeles and Miami, indicating that, as income increases, distance to a BCU also increases.

In the Los Angeles Study Area, percent Black and percent Latino are statistically significant predictors of greater distance to a BCU. In Miami, percent Latino is statistically significant, with a negative sign, indicating that greater distance to a BCU is predicted by declining Latino populations. Percent of the population that is Asian is statistically significant in Los Angeles and Miami, with percent Asian predicting nearness to a BCU. Percent of the population that is age sixty-five and above is found to be statistically significant in all three study areas, indicating that greater distance to a BCU is predicted by declining aging populations. Percent of the population that is age twenty-five and greater and that hold a high school diploma is found to be statistically significant and negative across all three study areas, which suggests that lower education levels are associated with nearness to a BCU.

The percentage of mortgage applications that were denied is statistically significant with a positive sign in Los Angeles, suggesting that mortgage denial predicts greater distance from a BCU. The percentage of mortgages made that were subprime is statistically significant with a positive sign in Miami, suggesting that increased rates of subprime lending are a predictor of greater distance to a BCU.

Table 6.—Simultaneous Autoregressive (SAR) Models Predicting Distance to a BCU.

Variable	Las Vegas	Los Angeles	Miami
Population Density	-0.00009***	-0.00002***	-0.00006***
Median Household Income	0.000002	0.000003***	0.000002***
Percent Black	0.00001	0.002***	-0.0007
Percent Latino	-0.002	0.0003*	-0.001**
Percent Asian	0.0001	-0.001***	-0.01**
Percent Age 65 Plus	-0.006***	-0.004***	-0.0001**
Percent 25 Plus HS Diploma	-0.009**	-0.004***	-0.001***
Percent Mortgage Purchase Denial	-0.0006	0.002**	-0.0002
Percent Subprime Mortgage Purchase	-0.0009	-0.0005	0.003***
r-squared	0.698	0.647	0.609
Log Likelihood	-276.57	-1501.46	-651.57
Akaike's Information Criterion	575.14	3024.93	1325.15

Note: ***=p<.01, **=p<.05, *=p<.1

Discussion and Conclusion

This article provides an examination of the geographic relationship between retail financial services locations, neighborhood-level demographic variables, and mortgage lending activity in three U.S. metropolitan study areas. The neighborhood-level predictors of the presence of both payday lenders and BCUs are examined using OLS and SAR statistical models. Median household income is a statistically significant, positive predictor of distance to a payday lender in all three study areas, which indicates that distance increases as income increases. In terms of race, the percentage of the population that is Black is a predictor of payday lender nearness in Miami, while percent Latino predicts nearness to an AFSP in Los Angeles and Miami. Neighborhoods with lower levels of high-school diplomas are predictive of nearness to a payday lender in all three study areas. The mortgage variables are less conclusive, but in Los Angeles, increased rates of subprime lending predict nearness to a payday lender.

In terms of nearness to a BCU, in Los Angeles and Miami, median household income increases as distance to a BCU increases, but not in Las Vegas. Per-

cent Black predicts greater distance to a BCU in Los Angeles only. Percent Latino predicts greater distance to a BCU in Los Angeles and Miami. Percent of the population that is Asian predicts nearness to a BCU in Los Angeles and Miami. Greater distance to a BCU is predicted by an increasing percent of the population that is age sixty-five and above in all three study areas. An increasing percent of the population that is age twenty-five and greater and that hold a high-school diploma is predictive of nearness to BCUs across all three study areas. In terms of mortgage lending, mortgage denial predicts greater distance from BCUs in Los Angeles only. Increased subprime mortgage lending is predictive of greater distance to BCUs in Miami only.

One limitation to the spatial analysis approach is that, while it is generally accepted that financial exclusion is a form of social exclusion (Carbo, Gardener, and Molyneux 2005; Aalbers 2011), representing the relationship between financial ecologies and individual behavior has proved to be challenging, and therefore assigning causality to particular societal factors is problematic (Clark 2013). Spatial analysis studies have long addressed such limitations. The ecological fallacy warns against drawing inferences about individual behavior based on aggregated data (Waller and Gotway 2004). At the same time, geographic estimates of financial inclusion and exclusion serve as a starting point for understanding and informing future research that may take into account individual-level factors. Temporal mismatch between data sources is also a limitation, but the study is restricted to the availability of data. The question of the significance of distance also remains (e.g., Do people bank where they live?).

Another limitation of note is the issue of zoning and the potential overlap of land-use and sociodemographic variables. This study finds that both AFSPs and BCUs tend to locate in more densely populated areas. The AFSP industry has replied to concerns raised in the academic literature by claiming that location decisions are based on zoning, visibility, and nearness to a sizable customer base, not income or race (Lehman 2006). Unfortunately, controlling for zoning was not practical for this study. However, as is the case in other studies (Cover, Fuhrman, and Garshick 2011), we acknowledge that the inclusion of market-related variables may provide an alternative explanation to location decisions.

Noting the aforementioned limitations, this study is an exploratory attempt to analyze the neighborhood-level predictors of retail financial service location. While the reasons for consumers to remain unbanked and underbanked are likely more complex, convenience, and the presence of AFSPs and ab-

sence of BCUs in LMI neighborhoods, may be contributing factors. Taken in sum, the results of this study suggest that there is a relationship between sociodemographic variables and financial service location, and that there are significant differences present when comparing different metropolitan areas. These findings support the conclusion of the presence of a dual financial service system and serve as the impetus for further research.

Notes

1 These HMDA data files (http://www.metrotrends.org/natdata/hmda/hmda_download.cfm) and the procedures for constructing them were initially developed by the Urban Institute to support DataPlace (www.dataplace.org). The data are licensed under the Open Database License (<http://www.metrotrends.org/natdata/ODbL.cfm>).

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Early Days: Documenting Historical Plant Cover on Santa Rosa Island, California

Peggy Hauselt
California State University, Stanislaus

Abstract

Santa Rosa Island is one of the Channel Islands off the coast of Southern California. Prior to joining Channel Islands National Park in 1986, Santa Rosa Island was a private ranch. The ranchers brought cattle, sheep, and other domesticated animals to the island in the mid-1800s. Intense agricultural operations had significant effects on the native plant cover. These nineteenth-century land cover changes occurred before documentation with aerial photographs or satellite images. This study relies on nineteenth-century documents, including a published letter, botanical floras, maps and notes from the U.S. Coast Survey, and magazine articles, to characterize the island's native plant cover and widespread disruptions during the five decades immediately after the establishment of the ranch. Based on the mid-nineteenth-century documents, (1) native shrubs were present on hillslopes, (2) non-native annual grasses were widespread, and (3) large patches of cacti existed. Thus, introduced grazing notably altered the plant cover by the late 1800s. Researchers and land managers can use these baseline results to inform more-extensive, twentieth-century land cover studies and the current restoration efforts of Channel Islands National Park.

Keywords: *California, Channel Islands, historical plant cover reconstruction, historical floras, U.S. Coast Survey Map*

Introduction

GEOGRAPHERS HAVE LONG RECOGNIZED the importance of incorporating prehistorical and historical human actions in our framework of land use and land cover (LULC) processes. With the establishment of Euro-American-style agriculture and ranching in the western United States, anthropogenic processes were often the dominant drivers of LULC change in the grasslands and shrublands of California (Starrs 1998). Geographers tend to spatially reconstruct historical LULC by examining systematic vegetation surveys, historical aerial photographs, and satellite images (Johnson 1980; Minnich 1980). The earliest spatially explicit data sources tend to become the baseline for changes in land cover and land use (Fagin and Hoagland

2014). However, in most parts of California, natural scientists did not collect such information until the twentieth century, more than 50 to 100 years after the widespread establishment of agriculture and ranching. Thus, California baselines from vegetation surveys and aerial photos postdate the beginnings of sheep and cattle ranching. Physical geographers, biogeographers, landscape ecologists, restoration biologists, and land managers confront challenges posed by a lack of information on nineteenth-century plant cover dynamics. Key unknown questions are as follows. What were the historical effects of humans on plant cover? How did vegetation dynamics change with historical human activities, such as nineteenth-century ranching? What historical patterns may inform current restoration projects? Without knowledge of nineteenth-century changes in vegetation, biogeographers and restoration biologists may miss important temporal shifts in landscape dynamics. In some areas, researchers have used palynological sources that were concurrent with the establishment of European settlement to reconstruct reference conditions (Evett, Dawson, and Bartolome 2013). This study relied on nineteenth-century documents to characterize, as best as possible, a mid-nineteenth-century plant cover baseline. This project supplements the palynological studies (Anderson et al. 2010; Cole and Liu 1994) and twentieth-century aerial photo and satellite image studies (Johnson 1980; Minnich 1980) to provide context for current restoration decisions on Santa Rosa Island (Channel Island National Park 2015; Coonan 1999).

Study Site

There are eight California Channel Islands (Figure 1). Channel Islands National Park includes five islands: Anacapa Island, Santa Rosa Island, San Miguel Island, Santa Barbara Island, and a portion of Santa Cruz Island. Santa Rosa Island is south of Santa Barbara, California (Rutherford 2011). Diamond-shaped Santa Rosa Island is the second-largest island in the park, with an area of 217 km² (National Cartography & Geospatial Center 2009). The rugged island ranges in elevations from 0 to 480 m, with three peaks exceeding 390 m (National Cartography & Geospatial Center 2009). Santa Rosa Island has a Mediterranean climate with summer temperatures moderated by the proximity of the Pacific Ocean. Marine air and fog minimize seasonal and daily temperature extremes. Winds are generally from the northwest and greatest in the spring (Junak et al. 2007).

Santa Rosa Island is covered with a variety of plant communities, including non-native annual grasslands, island chaparral, coastal sage scrub, oak woodlands, mixed woodlands, and coastal-bluff scrub (Clark et al. 1990). Non-native annual grasslands dominate most of the island and typically

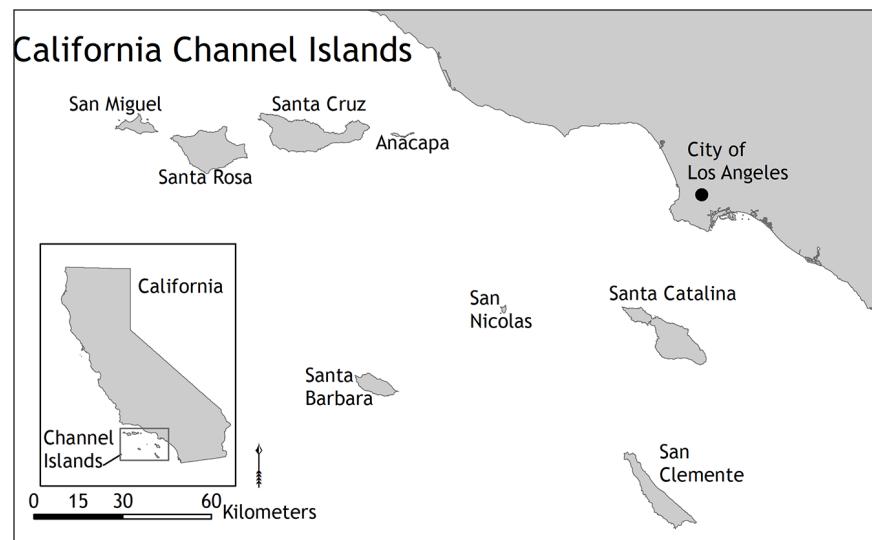


Figure 1.—California Channel Islands. (Author map; source: Cal-Atlas 2009)

cover the flatter areas of the island (Figure 2) (Clark et al. 1990; Hauselt 2003). The next most-common plant cover type is coastal sage scrub, often dominated by *Artemisia californica* (Figure 3) (Clark et al. 1990). Significant areas of the island have exposed mineral soil and bedrock due to the historical erosion of the topsoil (Woolley 1998).

The Santa Rosa Island plant communities also include many endemic, rare, federally protected, and/or unique species (Junak et al. 1995; Junak et al. 1997). Many of these plants are relict remains from paleoclimatic regimes (Axelrod 1967). The woodlands include *Pinus torreyana* s. *insularis* (Santa Rosa Island torrey pine) (Clark et al. 1990). As a species, torrey pines are endemic to Santa Rosa Island and coastal San Diego County (Jepson Flora Project 2018). *Lyonothamnus floribundus* s. *aspleniifolius* (island ironwood), is endemic to Santa Cruz, Santa Rosa and San Clemente Islands, and is found within the woodlands and chaparral plant communities (Junak et al. 1997). There are also two island endemic oaks: *Quercus pacifica* (island scrub oak) and *Quercus tomentella* (island oak) (Junak et al. 1997). There are three federally endangered Santa Rosa Island endemics: *Arctostaphylos confertiflora* (island manzanita), *Gilia tenuiflora* s. *hoffmannii* (Hoffmann's slender-flowered gilia), and *Castilleja mollis* (soft-leaf island paint brush) (Calflora 2014; Junak et al. 1997).



Figure 2.—Grazed grasslands on Santa Rosa Island in 1954. (Photo courtesy of the Santa Barbara Museum of Natural History, Image #:1399P; photographer unknown)



Figure 3.—*Artemesia californica*, coastal sagebrush on Santa Catalina Island, California in 2003. (Photo courtesy of Gary A. Monroe © 2010)

Land Use History of Santa Rosa Island

The present plant cover on Santa Rosa Island is a result of the natural history and prehistorical and historical anthropogenic activities. A human skeleton dating more than 10,000 years old indicates Santa Rosa Island is one of the earliest sites of human presence in North America (Johnson et al. 1999; Arnold, 2001). The prehistoric island economies of these complex hunter-gatherer societies were largely based on the extraction of marine resources and trading with peoples on the mainland (Arnold 1992; Arnold 2001). However, the inhabitants of the island had a significant effect on the landscape and vegetation through the use of plant resources and fire (Johnson, 1980; Timbrook 1993; Martin and Popper 2001). Santa Rosa, Santa Cruz, and San Miguel islands may have been home to as many as 3,000 Island Chumash at the time of European contact in 1542 (Johnson 1993). However, by the first half of the nineteenth century, there were no more Chumash left on Santa Rosa Island (Holland 1962), likely due to the introduction of western diseases, social disorder, and the violence caused by European settlers. Although not addressed in this study, researchers should not overlook the long-term effects of the Chumash and any predecessors on the plant cover and distribution when reconstructing past vegetation and physical dynamics on the island. Late Holocene pollen cores include a mixture of coastal sage scrub, chaparral, and grasslands species on Santa Rosa Island (Anderson et al. 2010).

During the nineteenth and twentieth centuries, the land use history of Santa Rosa Island paralleled that of mainland coastal California. By the 1850s, ranchers had introduced cattle, sheep, goats, and pigs to the island (Clark et al. 1990). During the second half of the nineteenth century, ranchers ran a large sheep operation on Santa Rosa Island. By the 1870s, the sheep ranch had 60,000 head (Holland, 1962). As observed on neighboring San Miguel Island during the periodic droughts of the late 1800s, the sheep likely stripped the island of most of the vegetation, except on steep slopes and cliffs, allowing introduced plant species to establish (Johnson 1980). On Santa Rosa Island, erosion during the initial period of historic grazing may have contributed to the rapid incision of barrancas and gullies (Woolley 1998). Researchers also documented feral sheep overgrazing on and damaging grassland and shrubland ecosystems on Santa Cruz Island in the twentieth century (Van Vuren and Coblenz 1987). These nineteenth-century pressures likely altered the landscape, as researchers have documented on the other California Channel Islands (Brumbaugh 1980; Johnson 1980; Dibblee and Ehrenspeck 1998).

In 1901, Vail and Vickers Cattle Company began to purchase Santa Rosa Island and convert it from the sheep ranch to a cattle-stock operation (Allen 1996). Cattle ranching and hunting continued on Santa Rosa Island under a special-use permit after the federal government purchased the island in 1986 (1996). However, during vegetation surveys of the island, National Park staff concluded that the ongoing disturbance from cattle grazing had a significant effect on several listed plant taxa, including *Arctostaphylos confertiflora* and *Castilleja mollis* (Rutherford and Chaney 1999). In 1998 the National Park revoked the cattle-ranching permit, and in 2011 the National Park revoked the elk- and deer-hunting permits (Channel Islands National Park 2011). Currently, the National Park is attempting to preserve and restore the native plant communities on Santa Rosa Island (Channel Island National Park 2015).

Sources and Methods—Nineteenth-Century Documents

This study located and examined the small assortment of nineteenth-century documents that describe the plant cover of the island just after the introduction of domesticated grazing animals. The historical documents were generally descriptive and secondary sources. These documents are archived both in large academic libraries, such as at the University of California, Santa Barbara, and in smaller collections at the Santa Barbara Botanical Garden, Santa Barbara Natural History Museum, and Santa Cruz Island Foundation. There is also a growing collection of historical material at the Channel Islands National Park Headquarters. Researchers can access some of the documents online, including the U.S. Coast Survey Map, which is available through the United States NOAA Office of Coast Survey's Online Historical Map and Chart Collection (2014). Across the documents, I read the archival sources and references regarding plant types and vegetation conditions were noted.

U.S. Coast Survey

The U.S. Coast Survey completed one of the earliest historical descriptions of Santa Rosa Island. The goal of the survey was to develop navigation charts that include geodesy, topography, and hydrography (Reithmaier 2001). In May of 1860, William Greenwell performed the initial survey of the island. His report includes brief notes and sketches describing the survey points he established (Greenwell 1860). These notes describe the locations of the survey points, which are typically relative to the ocean or water resources. Greenwell occasionally noted the surrounding topography, plant cover, and manmade structures (Greenwell 1860). The American Civil War interrupted the U.S. Coast Survey of the island. From April 1872 through February 1873, Stehman Forney returned to the island to continue the Coast Survey.

He re-evaluated Greenwall's original survey points and established new survey points. Forney's records included extensive descriptions of the island, including notes about the island's vegetation and topography. For instance, Forney described the location of a survey point: "The best way to get to it is to follow Canada Verde until you come to a small grove of willow surrounding a spring of water" (Forney 1872a). More helpful are Forney's extensive sketches included with the survey point descriptions (Forney 1872a). They showed the rough topographic contours and indicated some areas of plant cover. Forney also wrote letters to U.S. Coast Survey officials that provide further descriptions of the island (Forney 1872b). From 1873 to 1876, the botanist Otti Tittmann visited the California Channel Islands as part of the U.S. Coast Survey (Junak et al. 1995). From the Greenwall and Forney reports, the U.S. Coast Survey developed the first detailed topographic map of the island (Peirce 1872). A cartographer divided the map into two sheets and shows extensive areas of oak scrub and cacti scrub (see Figure 4, with an excerpt of the map, for examples of oak and cacti scrub representation). The U.S. Coast Survey map is a precursor to the aerial photos used to examine land cover today (Figure 5).

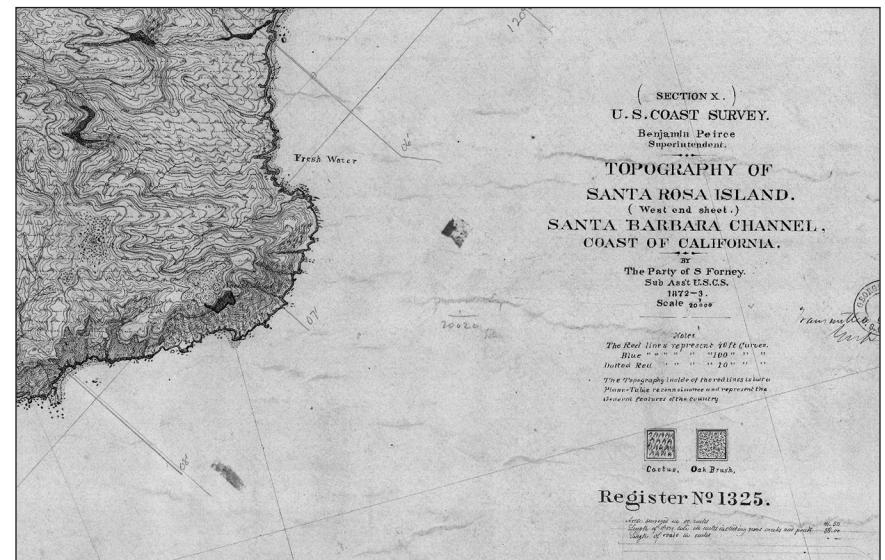


Figure 4.—Portion of the U.S. Coast Survey Map showing the southern tip of Santa Rosa Island. (Peirce 1872)

To better assess the distribution of oak scrub and cacti scrub, this study geo-referenced the U.S. Coast Survey maps to an orthophotograph of the island (USDA-FSA-APFO 2005). The extents of the oak scrub and cacti scrub



Figure 5.—Digital orthophoto of southern tip of Santa Rosa Island. (USDA-FSA-APFO 2005)

patches were then digitized. The locations of these patches were compared with a slope model that was derived from a ten-meter digital elevation model (DEM) of the island (National Cartography & Geospatial Center 2009). Examinations were made to see if the scrub was likely to mapped on flat or sloped surfaces.

Island Flora

The California Channel Islands attracted many early nineteenth-century botanists (Junak et al. 1995). For example, William Gabel, from the Philadelphia Academy of Science, visited Santa Catalina Island in 1847 (Dunkle 1950). Albert Kellogg published the first botanical note about Anacapa's native island mallow, *Lavatera assurgentiflora* (1854). Several subsequent scientific articles and floras followed: William S. Lyon's Santa Catalina Island and San Clemente Island floras (1886a; 1886b), Edward Greene's Santa Cruz Island article (1886), and Greene's San Miguel Island article (1887). Town-

shed S. Brandegee published the first Santa Rosa Island flora (1888). Brandegee based this flora on his botanical survey on the eastern and northern parts of the islands. His survey was conducted in June, when some of the grasses may have been flowering, possibly leading to easier species identification (1888). Brandegee stated that a more-extensive survey would have resulted in a larger flora (1888). In addition to listing the observed plant species, Brandegee included an occasional note on the abundance and location of specific plants (1888). Subsequently, Brandegee compiled the flora of five California Channel Islands (Brandegee 1890). This project compared the Brandegee flora (1888) with modern synonyms of the taxa nomenclature in *The Jepson Manual of Higher Plants in California* (Hickman 1993), the *Jepson eFlora* (Jepson Flora Project 2018), *A Checklist of Vascular Plants of Channel Island National Park* (Junak et al. 1997), and *Tropicos.org* (Tropicos 2018).

Newspaper and Magazine Articles

The island also attracted the attention of nineteenth-century journalists, and articles soon after appeared in a variety of newspapers beginning in the 1870s, including the *Ventura Signal* (1874) and San Francisco's *The Morning Call* (1883). The *Overland Monthly* magazine published a series of articles describing sheep ranching on Santa Rosa Island and made occasional references to the vegetation on the island and the effects of human activities on the environment (Browne 1874; Kinsell 1891; K 1893).

Personal Letters

In addition to documents penned by surveyors and botanists, people who lived on the island during the nineteenth century wrote letters and descriptions of the island. The Santa Cruz Island Foundation has published many of these historical letters (Allen 1996). Typically, the writers described the ranching operations and personal experiences. Unfortunately, most of the documents contain little description of the plant cover of the island. Only one early letter, by Dixie W. Thompson, has particular relevance to this study (Thompson 1996). He noted the conditions of the rangeland shortly after ranching began on the island (1996).

Results—Nineteenth-Century Plant Cover

Collectively, the documents point to three baseline characteristics about the composition and distribution of plants and plant cover on Santa Rosa Island during the first few decades of intense ranching in the nineteenth century: (1) the native woody plants tended to grow on slopes, (2) non-native herbaceous plant species became established, and (3) prickly pear cacti, *Opuntia* spp., was widespread on the island.

Native Woody Plants

On the Channel Islands, native trees and shrubs are primarily located on hillsides and steep slopes (Clark et al. 1990; Minnich 1980). The historical documents show a similar pattern in the late 1800s. Both U.S. Coast Surveyor Greenwall and Forney noted willows in watered canyons during their surveys of the topography (Greenwall 1860; Forney 1872a). Greenwall also noted pine and oaks on hillsides (1860). Forney wrote that, “The island is well watered and covered with the wild grasses and coarse bushes of California. Scrub oak and pines are found in the gulches and on the south faces of the hills” (Forney 1872b). The U.S. Coast Survey maps displayed abundant oak scrub on the north-facing hillsides and canyons of the northeastern quadrant of the island (Peirce 1872). In the late 1880s, the botanist Brandegee noted, “The shrubby vegetation and trees of Santa Rosa are nearly all confined to the sheltered hillsides and cañons of the eastern portion of the island” (1888, 220). Specifically, Brandegee wrote of *Prunus ilicifolia*: “On Santa Rosa Island, it is confined to the bottom of the cañons...” (1888, 209). He wrote of *Pinus torreyana*, “About one hundred trees are growing on the bluffs of the eastern shore” (1888, 217). Additionally, Brandegee found that endemic island oak, *Quercus tomentella*, was “Common in cañons on the east and north sides” (1888, 217).

Non-Native Herbaceous Plants

Today the island has large areas of non-native annual grasslands. Many of the non-native annual grass and herbaceous species originated in other Mediterranean regions but became established in California over the past 200 years (HilleRisLambers 2010). Pollen records show that non-native species arrived on Santa Rosa Island by the 1850s (Anderson et al. 2010). An early letter by the rancher Dixie W. Thompson noted that there was ample grass for grazing animals, but he did not specify the grass names, species, or forms of plant life (Thompson 1996). An 1874 magazine article noted that trees were absent on the mesas of the island (Browne 1874). The U.S. Coast Survey documents only reference grasses in general terms and never specify if the grasses are native to California (Greenwall 1860; Forney 1872a). An *Overlander* article refers to the presence of alfileria, a non-native herb (perhaps *Erodium cicutarium*) found in the non-native annual grasslands (Browne 1874). This is the earliest document this study found indicating the presence of a non-native grassland species on Santa Rosa Island. In the first systematic survey of northeastern Santa Rosa Island, Brandegee identified eleven grasses (1888). Six of these grasses are native to California; five are non-native (Table 1). Some of the non-native grasses now common on the island were not listed in the 1888 Santa Rosa Island flora, including *Bromus*

rubens and *Avena fatua* (Cole and Liu 1994), even though Brandegee listed these grasses in the historical floras of neighboring California Islands (1890). Brandegee also listed non-native annual herbs, including thistles such as *Centaurea melitensis*, *Sonchus oleraceus*, and *Sonchus asper* (1888).

Table 1.—Grasses Listed in the 1888 Flora of Santa Rosa Island (SRI). (Brandegee 1888)

Brandegee's Plant Name	Possible Modern Synonym	California Native	Common Name	Now on SRI
<i>Stipa setigera</i> , Presl.	<i>Nassella neesiana</i>	Non-native	Uruguayan needle grass	No
<i>Agrostis verticillata</i> , Vill.	<i>Agrostis viridis</i>	Non-native	water bent	Yes
<i>Agrostis Scouleri</i> , Trin.	<i>Agrostis exarata</i>	Native	Bentgrass	Yes
<i>Koeleria cristata</i> , Pers.	<i>Koeleria macrantha</i>	Native	June grass	Yes
<i>Distichlis spicata</i> , L.	No Change	Native	salt grass	Yes
<i>Bromus Hookerianus</i> , Thurb.	<i>Bromus carinatus</i>	Native	California brome	Yes
<i>Elymus condensatus</i> , Presl.	<i>Leymus condensatus</i>	Native	giant rye	Yes
<i>Agropyrum repens</i> , Beauv.	<i>Elytrigia repens</i>	Non-native	quack grass	No
<i>Hordeum murinum</i> , L.	No Change	Non-native	Foxtail	Yes
<i>Festuca microstachys</i> , Nutt.	<i>Vulpia microstachys</i>	Native	Pacific fescue	No
<i>Festuca myurus</i> , L.	<i>Vulpia myurus</i>	Non-native	foxtail fescue	Yes

Sources: Brandegee 1888; Hickman 1993; Jepson Flora Project 2018, Junak et al. 1997; Tropicos 2018.

Cacti Patches

By the 1870s, cacti were widespread across the island. The 1860–1873 U.S. Coast Survey mapped cactus patches across the islands. Some cactus patches were mixed with oak brush and other cactus patches were isolated. The isolated patches averaged 46,000 m² (Peirce 1872). This study speculates that *Opuntia* spp., prickly pear cacti, dominate these cactus patches, because prickly pear species are common throughout the western United States (Defelice 2004). Brandegee’s (1888) flora listed one type of cactus on Santa Rosa Island, *Opuntia engelmannii*, Salm., (?) *littoralis*, Engelm. Today, botanists classify this cactus as *Opuntia littoralis* v. *littoralis*, coastal prickly pear (Hickman 1993). The cactus scrub also may have contained *Opuntia oricola*,

tall prickly pear, and *Opuntia prolifera*, coastal cholla. Although these cacti are not listed in Brandegee's nineteenth-century flora of Santa Rosa Islands, *O. oricola* and *O. prolifera* are native cacti on the island (Junak et al. 1997).

In the rangelands of the western United States, native *Opuntia* spp. may become weedy (Defelice 2004). *Opuntia* spp. have fleshy leaves that are often covered with spines (Figure 6). In rangeland areas, domesticated animals, such as sheep and cattle, may selectively graze on other species and leave *Opuntia* spp. (Goeden, Fleschner, and Ricker 1968). Animals can detach the cactus leaf pads that then take root and spread the cactus scrub (Defelice 2004). Photos of Santa Catalina Island taken in the 1880s show widespread *Opuntia littoralis* in overgrazed areas of coastal sage scrub (Minnich 1980). Historically, *Opuntia* spp. were widespread in degraded rangelands on neighboring Santa Cruz Island until researchers introduced cochineal insects as a bio-control in the twentieth century (Goeden, Fleschner, and Ricker 1968). The widespread areas of cactus on Santa Rosa Island in the nineteenth century were likely due to overgrazing by domesticated sheep and cattle (Junak, S., Santa Barbara Botanic Garden's Herbarium Curator, 2011, in-person conversation).



Figure 6.—*Opuntia littoralis*, coastal pricklypear cactus on Santa Catalina Island, California in 2003. (Photo courtesy of Gary A. Monroe © 2010)

In Southern California, native *Opuntia* spp. are found in coastal sage scrub and chaparral (Jepson Flora Project 2018). Today, on the California Channel Islands, *Opuntia* spp. are typical in coastal sage scrub, not in chaparral (Clark et al. 1990; Junak et al. 2007). Coastal sage scrub covers approximately 20 percent of Santa Rosa Island (Clark et al. 1990; Junak et al 2007). In relevé samples of coastal sage scrub, *Opuntia littoralis*, had a frequency of 9.4 percent, and a relative importance value of 0.3 percent (Clark et al. 1990). On Santa Rosa Island, *Opuntia* spp. may also be typical in coastal bluff scrub (Junak et al. 2007), but they were absent from surveys of the coastal bluff scrub in 1988 (Clark et al. 1990). On Santa Catalina Island and San Clemente Islands, south of Santa Rosa Island, *Opuntia* spp. dominate maritime cactus scrub (Junak et al. 2007). Santa Rosa Island is too far north for maritime cactus scrub, and Santa Rosa Island vegetation does not have the *Opuntia* species richness (Junak et al. 2007). Today, *Opuntia* spp. are commonly associated with coastal sage scrub, and the historical patches of *Opuntia* spp. are no longer dominant across wide areas of the island (Junak et al. 2007).

Discussion and Conclusion

Synthesis

Comparing mid-1800s plant cover with current plant cover, this study found that the Santa Rosa Island's woody plant cover has been relatively stable in location and type. The twentieth-century aerial photos and satellite images show that the native woody species, especially trees, are on steep slopes and canyon bottoms (Hauselt 2003), which is consistent with the archival documents. The native woody species, trees and shrubs, were confined to steep slopes during the mid-1800s (Greenwall 1860; Forney 1872a; Forney 1872b; Brandegee 1888). This distribution may have been due to intense grazing or non-anthropogenic processes, such as temperature and moisture constraints. The documents do not reveal whether the distribution of native woody species was limited to the slopes before the establishment of domesticated grazing, or if it was reduced to the slopes with the onset of sheep grazing in the mid-1800s.

Unlike the woody plant cover, the non-woody plant cover has changed over time. Today, non-native annual grasslands generally cover the flat areas of the island (Clark et al. 1990; Junak et al. 2007). The grasslands include a variety of native grasses, non-native grasses such as *Avena barbata* and *Bromus diandrus*, and non-native herbaceous plants such as *Silene gallica* and *Sonchus oleraceus* (Clark et al. 1990; Kindsvater 2010). The historical documents show non-native annual grasslands establishing on the island by

the mid-1800s (Brandegee 1888). Grasslands were probably on flat terrain, but the species composition was likely transitioning due to the ongoing disturbances of intense grazing, periodic nineteenth-century droughts, and the introduction of non-native species (HilleRisLambers 2010). Although Brandegee's flora included reference to some non-native grass and herbaceous species that are common today, such as *Hordeum murinum* and *Centaurea melitensis* (Brandegee 1888), the flora list did not include other non-native grasses that are now common on the island, such as *Bromus rubens* and *Avena fatua*. Thus, the current grassland composition was not fully established by the mid-1800s. Like the non-native grasses, the role of native *Opuntia* spp. has changed. Probably due to selective grazing (Defelice 2004), *Opuntia* spp. patches were widespread in the mid-1800s (Peirce 1872). In the subsequent 150 years, the role *Opuntia* spp. played was significantly reduced. Now, it is a minor component of the island's coastal sage scrub (Clark et al. 1990; Junak 2007).

Shortcomings of Historical Documents

As with all studies using archival sources, it is challenging to use archival sources to establish a baseline plant cover for the island when the intentions of the nineteenth-century authors did not mirror the goals of the study. The archival sources provide non-numeric, unstructured descriptions of the plant cover. For example, the magazine and newspaper articles were not scientific studies. The newspaper and magazine articles discussed only a few notable plants and provided some general landscape descriptions (Browne 1874; Kinsell 1891; K 1893). These articles did not critically analyze the activities on the island, nor did they describe plant cover, beyond brief notes. The charge of the U.S. Coast Survey was to develop navigation charts that included geodesy, topography, and hydrography (Reithmaier 2001). Although plant cover was not the primary focus of the U.S. Coast Survey maps, the maps were useful in that they show areas of oak and cactus.

Analysis of the historical documents was also challenging due to the lack of systematically collected information. The coastal surveyors noted specific plants near some survey points, but not at all survey points (Greenwall 1860; Forney 1872a; Forney 1872b). For example, Forney did not state how he collected the plant cover data for the 1872 map, but the cartographer did state how he mapped the information (Peirce 1872). Additionally, researchers have questioned the spatial accuracy of other California Coast Survey maps (Grossinger 2001). Brandegee, for example, surveyed only part of Santa Rosa Island (1888) and did not state how he collected flora information.

Another challenge was that the terms and descriptions of the plant species and plant cover were often inconsistent with modern botanical names (Edmonds 2001). For instance, the journalists referred to the plants with general, common names, such as "alfilaria" and "wild oats" (Browne 1874). Additionally, the scientific nomenclature of plant names has changed through time. Some of the scientific species names listed in the Brandegee flora have several synonyms. For instance, Brandegee listed *Agropyrum repens* (1888), but Junak et al. refers to it as *Elytrigia repens* (1997), and the Jepson Flora Project refers to it as *Elymus repens* (2018).

Conclusion

Despite the problems with interpreting historical documents, they are among the best sources available to characterize the spatial distribution of plant cover on Santa Rosa Island during the mid-1800s. With the initial disruption of sheep and cattle grazing, the mid-1800s was an important time period in the establishment of the current island plant cover. The archival sources show how the plant cover, especially non-native grasses and cacti, was still in flux. Researchers and scientists can use this general background information for the management and restoration of native plant cover on Santa Rosa Island.

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Yipster Gentrification of Weird, White *Portlandia*

Eric Fowler
and
Matthew Derrick
Humboldt State University

Abstract

Advertised locally by a citywide mantra of “Keep Portland Weird” and reinforced nationally by the *Portlandia* television series, Portland, Oregon, is touted as a hip and creative metropolis. Although the city may feature artistic diversity, actual demographics of Portland highlight a stark deficiency in ethno-racial diversity: Portland is among the United States’ whitest cities. Within this context, gentrification that began in the 1990s has led to the displacement of an African American population from its historic roots in Northeast Portland—the site, not uncoincidentally, of many of the Fred Armisen- and Carrie Brownstein-led comedy skits. Taking *Portlandia* as a work that shapes meanings toward social/racial justice issues like gentrification in its onscreen representation of Portland, we argue in this paper that the show, in bolstering Portland’s national reputation for whiteness/weirdness, contributes to the marginalization of a nonwhite gentrified populace by normalizing, yea valorizing, decidedly privileged white patterns of consumption.

Introduction: “Keep Portland Weird”

PORLAND, OREGON, IS widely recognized for not only its livability, but also its progressive politics, socially responsible business practices, and environmentally sustainable policies. Reinforced by the nationally televised comedy program *Portlandia*, the city is touted as “hip and creative” (Moon 2013, 1), its populace defined by an affinity for “all things independent” and driven by the mantra “Keep Portland Weird” (Turnquist 2010, 1). Amid the putative tolerance and creative diversity lacing the cool cultural confines of Portland, demographics indicate a striking deficiency in ethno-racial diversity. With the 2010 census reporting the city population as 76.1 percent white and 6.3 percent black or African American, Portland is “America’s ultimate white city” (Renn 2009). In a context of Portland’s overall whiteness, gentrification—a varied set of processes that modify a neighborhood’s character and composition, culminating in the “direct and indirect displacement of lower income households with higher income households” (Papachristos et al. 2011, 216)—has contributed to the displacement of an already small African

American population from its historic roots in neighborhoods dotting the city's North/Northeast side, where the share of black Portlanders dropped from 31 percent in 1990 to 15 percent in 2010. The ousting of a marginalized group, at least partially undermining Portland's pretensions to be a bastion of social/racial justice, provides a foundation for the following preliminary, foundational assertion: *Portlandia*, the television comedy series set and filmed in its namesake metropolis, provides a lens through which varied dynamics associated with gentrification within Northeast Portland can be interrogated and better understood.

In *Portlandia*'s inaugural episode, its cast hails the city as a place where "young people go to retire." Indeed, the displacement of African Americans from NE Portland, where a significant portion of the show's skits take place, has been accompanied by increased percentages of eighteen- to thirty-four-year-olds. The young, white gentrifiers form the face of Portland *hipsterism*—connoting a subculture group linked to fetishization of "scarcity, uniqueness, authenticity, and individualism" alongside non-conformist consumption sensibilities—as well as *yuppiedom*—connoting young, upwardly mobile professionals who are comparatively wealthy, predominantly white, educated, and materialistic in consumer spending (Eriksson 2006, 9; Portland Development Commission 2001). We henceforth refer to this gentrifying "creative class" (Florida 2002; 2012), to the extent that it combines traits of yuppies and hipsters, as *yipsters*.

Through an investigation of *Portlandia*'s portrayal of yipster lifestyles, we show how "reel" urban representations are imbricated with a "real" Portland (Aitken and Dixon 2006, 327). The reel refers to the "cinematic city" of the show's onscreen images of Portland. The real, in contrast, appertains to the real-life "concrete city" upon which *Portlandia* is based (Da Costa 2003, 192). With the reel-real relationship in mind, an aim of this paper is to provide insight into how *Portlandia*'s depictions of yipsterism, whiteness, and weirdness help to crystallize dominant meanings toward gentrified spaces and their predominant present (younger whites) and past (older nonwhites) occupants. More specifically, we investigate how *Portlandia*'s representations of whiteness and weirdness (e.g., creativity, coolness, artisanship, anti-establishment attitudes, etc.) serve to bolster—and to hide—processes of gentrification in NE Portland. Drawing on traditions in radical and filmic geography,¹ we employ textual analysis to show that *Portlandia* plays an important role in constructing Portland's reputation as a weird and white place; and in the process of glorifying yipster lifestyles and consumption habits, the comedy series actively contributes to further socio-spatial mar-

ginalization of nonwhites by normalizing NE Portland as a "white space" at the expense of the neighborhood's nonwhite legacy and remaining black residents, and enforcing the "white ideal" of consumer capitalism (Atkinson 2011, 112; Burnett and Bush 1986).

Portlandia's filmic landscapes, broadcast to nearly 70 million homes in the United States (TV by the Numbers 2013), are not innocent, objective reflections of some quirky, hip place. No, they form a *work*—a product of "human labor that encapsulates the dreams, desires, the locations of the people and social systems that make it" (Aitken and Dixon 2006, 330)—that *does work*—acts as a "social agent in the further development of a place" (Ibid.)—by conveying an aspirational, yuppie-hipster lifestyle. In spotlighting whiteness as a module of the yipster lifestyle symbolically tied to the pleasures of a consumption-laden identity, *Portlandia* is an ideologically charged social agent that does work to shape meanings and consequences—pointedly unshown in the show—that gentrification holds for a gentrified populace of working-class nonwhites in NE Portland.

Representation, Cinema, and the City

The concept of representation figures in the most powerful engagements in filmic geography studies of the relationship between the cinematic city and concrete city (i.e., *Portlandia* vs. Portland) (Shiel and Fitzmaurice 2011). Understood as a description or portrayal of someone or something as being of a specific nature, representation is at the core of scientific practice, intrinsic to geographic research, and is even seen as a summarization of the "whole process of knowledge production" itself (Söderström 2011, 11). The field of geography is inherently involved in the act of representation (Gren 1994). In effect, the discipline bears the world as it is experienced or understood and proceeds to represent this world as images defined within the interweaving categories of written, oral, and/or visual mediums (Gomez 2010; Gren 1994). Film content such as *Portlandia*, comprising text that can be read, combines visual and oral aspects through both moving images and sound film/audio.

In looking at *Portlandia*'s portrayal of whiteness, weirdness, and yipsterism, our examination of representation first draws on literature concerned with "alternative representations of the city" that emerged in the 1970s with radical geography (Söderström 2011, 13). Amid a broader "crisis of representation" in the 1960s and 1970s, when the notion of knowledge as the "assemblage of accurate representation" came under attack, the seminal works of Harvey (1973) and Bunge (1971) revealed how geographical representations carry with them a distinctly ideological character. In this paper, we show that

Portlandia, though positioned as an innocuous (if ironic) comedy series, is steeped in a white consumer-capitalist ideology that contributes to further socio-spatial marginalization of nonwhites.

The insight that representations are ideology-laden brings up the question of power. Söderström (2011) asserts that spatial representations are often privileged in that they are primarily representative of the interests of the powerful, of upper-class elites. Turning here to our case study, at least three pertinent questions arise: First, who in *Portlandia* has the power to produce representations of Portland? Second, who and what are being represented? And third, who is denied representation in the show? Regarding the former two inquiries, *Portlandia*'s economically elite producers represent objects (the "what") and subjects (the "who") of (1) gentrified spaces and their newly acquired establishments (e.g., quirky coffee shops, artisan knot stores) and (2) the gentrifying group (though not identified as such in the show)—in the case of Northeast Portland: the yipsters. To address the latter query, *Portlandia*, especially in its earliest seasons, ignores a gentrified populace of NE Portland, namely African American and other nonwhites who are almost completely unrepresented in what until relatively recently was viewed in the real city as a black space. This denial in representation is tantamount to whitewashing, erasing a geographically specific nonwhite history. Portland is normalized as a white space, reinforcing dominant ideals of consumer capitalism through a glorification of privileged yipster consumption habits. *Portlandia*'s representations serve a dual purpose of ignoring the gentrified and glorifying the gentrifiers, which contributes to marginalizing effects of the neighborhood-changing processes of gentrification in NE Portland.

Much like early radical geographers Bunge (1971) and Harvey (1973) explored urban realities not yet represented by mainstream cultural geography as lenses to understand representations of social and racial justice (e.g., Bunge's examination of the ideologies of spaces of death and power-driven machines in Fitzgerald, a small, integrated neighborhood in 1960s Detroit), *Portlandia* herein is used to understand the relationship between a national television series and social/racial justice issues regarding NE Portland's quarter century of gentrification. Critically reading *Portlandia*'s representations of gentrified spaces, whiteness, and weirdness as facets intrinsic to yipster consumption, we analyze how the ideological character and social/cultural embeddedness of this TV series' works—its filmic landscapes and depicted characters (i.e., yipsters)—act as social agents which do work through value-loaded meaning creation per NE Portland (Aitken and Dixon 2006).

Yuppiedom + Hipsterism = Yipstersim

The term *yipster*, a neologism blending *yuppie* and *hipster*, characterizes much of Northeast Portland's gentrifying class. *Yuppies*—young, upwardly mobile professionals—refers to a predominantly white, college-educated demographic defined by materialist consumption patterns directly allowed for by their generally high-earning jobs (Belk 1983; Burnett and Bush 1986; Guthman 2003; Hammond 1986). And hipsters, the other half of the composition, refers to a marketable contemporary subculture that Kiran (2013, 1) defines as "young, semi-affluent, semi-artsy, semi-ironic, and often white, though it is by no means confined to white people" with attitudes, tastes, and values driven by a fetishization of the "authentic" (Lorentzen 2007). Chief actors in the gentrification of Northeast Portland—which, again, goes unaddressed in the show—yipsters account for most every human representation of any significance in *Portlandia*; by comparison, the gentrified populace of working-class nonwhites is, for all intents and purposes, invisible.

Burnett and Bush (1986, 27–35) assign yuppies six behavioral/personality traits: concern for personal health; use of convenience products and services; confidence, optimism, and unemotionality; travel and relocation; positive attitudes toward advertising; and concern for achieving success and acquiring material possessions. The latter of these traits—concern for material wealth—is particularly pertinent here. Yuppiedom is the yipsterism facet most exemplified in the group's propensity to indulge in luxury items (e.g., organic food, conscious clothing, paintings, cars, etc.), which Guthman (2003) notes are beyond both the "economic and cultural" reach of price-conscious non-yuppies such as the gentrified populace of working-class nonwhites. In an examination of the growth in the organic food ("yuppie chow") industry within both geographic and historical contexts, Guthman further suggests that the success of the organic food industry is wrapped up with gentrification—yuppies, she contends, drive organic food consumption by maintaining "a keener interest in the constituent ingredients of food" as they gentrify neighborhoods in cities such as San Francisco (2003, 54). Therefore, highlighting a class divide in consumption habits—yuppies vs. non-yuppies (likened to *Portlandia*'s gentrifying yipsters vs. gentrified non-yipsters)—yuppies acquire, in a seemingly endless manner, material possessions and luxury items as status symbols, with little regard for price (Burnett and Bush 1986; Guthman 2003).

The yipster combines traditional yuppiedom with the attitudes, tastes, and values of hipsters, who are described by Eriksson and Grétarsdóttir in their study of hipster consumption as a subculture group linked with "bohemian-

ism and postmodern lifestyle" (2006, 4). Hipsters are often associated with indie/alternative music, progressive and/or independent political views, alternative lifestyles, and non-mainstream consumption sensibilities that ostensibly counter norms of conformity (Eriksson and Grétarsdóttir 2006; Herbert 2013; Kellogg 2013). Central to the hipster subculture is self-representation that invokes calculated consumption of fashion, media, and food that "fetishizes the authentic" (Eriksson and Grétarsdóttir 2006, 9; see also Lorentzen 2007; Perry 2013). Evocative of yuppie materialism as class status (Burnett and Bush 1986), hipsterism likewise emphasizes consumerism but with an eye trained on "scarcity, uniqueness, authenticity, and individualism" (Eriksson and Grétarsdóttir 2006, 4).

The Real City: Gentrification in Northeast Portland

Gentrification, which has transformed Northeast Portland—the city's historically black area—since the 1990s, is defined by Papachristos et al. as a set of processes that alter the "character and composition" of a neighborhood, resulting in the "direct and indirect displacement of lower income households with higher income households" (2011, 216). The processes of gentrification are associated with sharply increased median household incomes, spiking property values, and newfound "presence of lifestyle amenities" that appeal to the tastes of wealthier residents (Papachristos et al. 2011, 216–219).

The Oregonian, Portland's foremost newspaper, has highlighted the uptick of gentrifying amenity establishments that have changed the face of Northeast Portland. A 2016 piece stated that NE neighborhoods along North Williams/North Vancouver avenues, "once home to black businesses and clubs, are now the site of construction cranes and trendy restaurants" (Theen 2016). Another article characterized the 2013 opening of New Seasons (a natural foodstuffs grocer depicted in season one, episode three of *Portlandia*) on Williams Avenue, and the arrival of Salt & Straw on Alberta Street in 2011, as factors contributing to the "transformation of North and Northeast Portland" (Suo 2014). An upscale ice-cream shop hawking artisan "farm-to-cone" ice cream with unorthodox flavors (e.g., bone marrow, foie gras, oatmeal raisin cream pie, etc.), Salt & Straw purportedly "reeks of Portland" and, as such, is tailored to the yipster gentrifier's consumption palette, exemplifying a class of amenity businesses that have remade the city's northeast (Salt & Straw 2018). Against this backdrop, as we explore below, *Portlandia* is populated by representations of other such lifestyle amenities that cater to yipsters in its depiction of businesses such as gourmet grocery markets, specialty art/craft supply stores, and coffeeshops.

The booming artisan economy, fueled by amenity and luxury item-oriented consumption values associated with yipster gentrifiers, takes place alongside the disappearance of local manufacturing industries employing a predominantly nonwhite working class (Drew 2012). As such, gentrified spaces in cities like Portland have become increasingly governed by an urban neighborhood culture that Lloyd (2002) calls "neo-bohemia," wherein culture, likened to a latte purchased from a coffeeshop, is available to be "consumed" as if a commodity. Scrutinizing cultural production and consumption in the context of NE Portland's gentrifying Alberta Street commercial district, Shaw (2005) found that residents participate in the neo-bohemian culture in varying manners. Particularly pertinent to arguments presented in this research, specifically that *Portlandia* acts to normalize a consumerist culture of a particular inflection, analysis of Shaw's interview data revealed that long-time black residents interpreted the arriviste neo-bohemian culture as both racialized and productive of decidedly white cultural space (2005, 75–86).

To frame the historic and geographic setting of the NE Portland neighborhoods impacted by the processes of gentrification, Figure 1 displays the Willamette River's division of the city into neighborhood quintants: North, Northeast, Southeast, Southwest, and Northwest. NE Portland—the city's historic African American community center since the 1930s (Moreland 1993; Moreland 2013)—has experienced gentrification that, beginning in

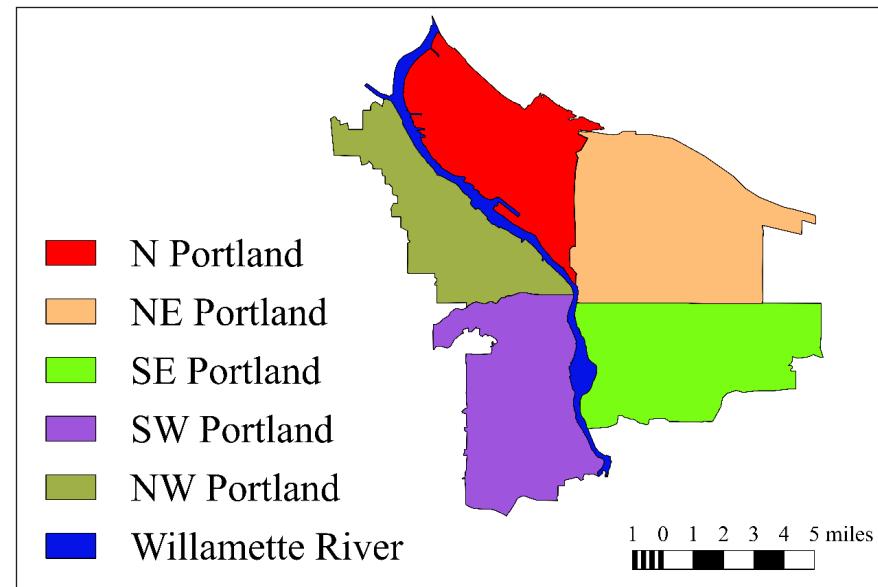


Figure 1.—Neighborhood quintants of Portland. (Eric Fowler map)

the 1990s, has fundamentally changed its character and composition by shifting the area's demographics from predominantly older black/working class residents to younger white/middle- and upper-class residents, i.e., yipsters (Coffman et al. 2007).

A dramatic shift in race demographics is illustrated in the series of maps displayed in Figure 2 that are based on 1990, 2000, and 2010 US Census data for inner North/Northeast tracts bounded by North Greeley Avenue, North Dwight Avenue, North and Northeast Columbia Boulevard, Northeast 33rd Avenue, and Interstate 84. Even a cursory perusal of the maps reveals a steady retreat in the black share of the area. In 1990, African Americans accounted for 50 to 80 percent of Albina's residents, and from nearly one-third to one-half of the population in neighboring areas. By 2000, though its overall complexion had noticeably lightened, NE Portland retained a significant degree of its historical black identity. This was true especially in Albina, a central NE neighborhood that was home to "17 percent of Portland's total population but 39 percent of the total people of color in the city," and most of the people of color were African Americans (Coffman et al. 2007, 7). But the pressures of rising rents and skyrocketing properties were palpable; the average home value in the area surrounding Martin Luther King Avenue (a prominent Albina street) rose "approximately 161 percent between 1993 and 2003, compared to a Portland citywide increase of 105 percent" (Coffman et al. 2007, 27). With these forces of gentrification, the African American population in the thirteen census tracts surrounding MLK Avenue dropped from 45 percent to 36 percent of the total population between 1990 and 2000 (Coffman et al. 2007).

By 2010, after nearly two decades of gentrification, N/NE Portland had become dominated by whites. And not just any. It had become dominated by young whites (see Table 1). The yipsters had arrived, displacing the older, the nonwhite, the unfortunately unhip. Observers have characterized the gentrification of NE Portland as harrowing, unjust, and even cruel (see, e.g., Bodenner 2016; Savitch-Lew 2016; Semuels 2016). However, the makers of the best-known representation of the city, *Portlandia*, assist in normalizing and thereby exacerbating the impacts of NE Portland's gentrification through glorification of decidedly white yipster consumer lifestyles and consumer spaces.

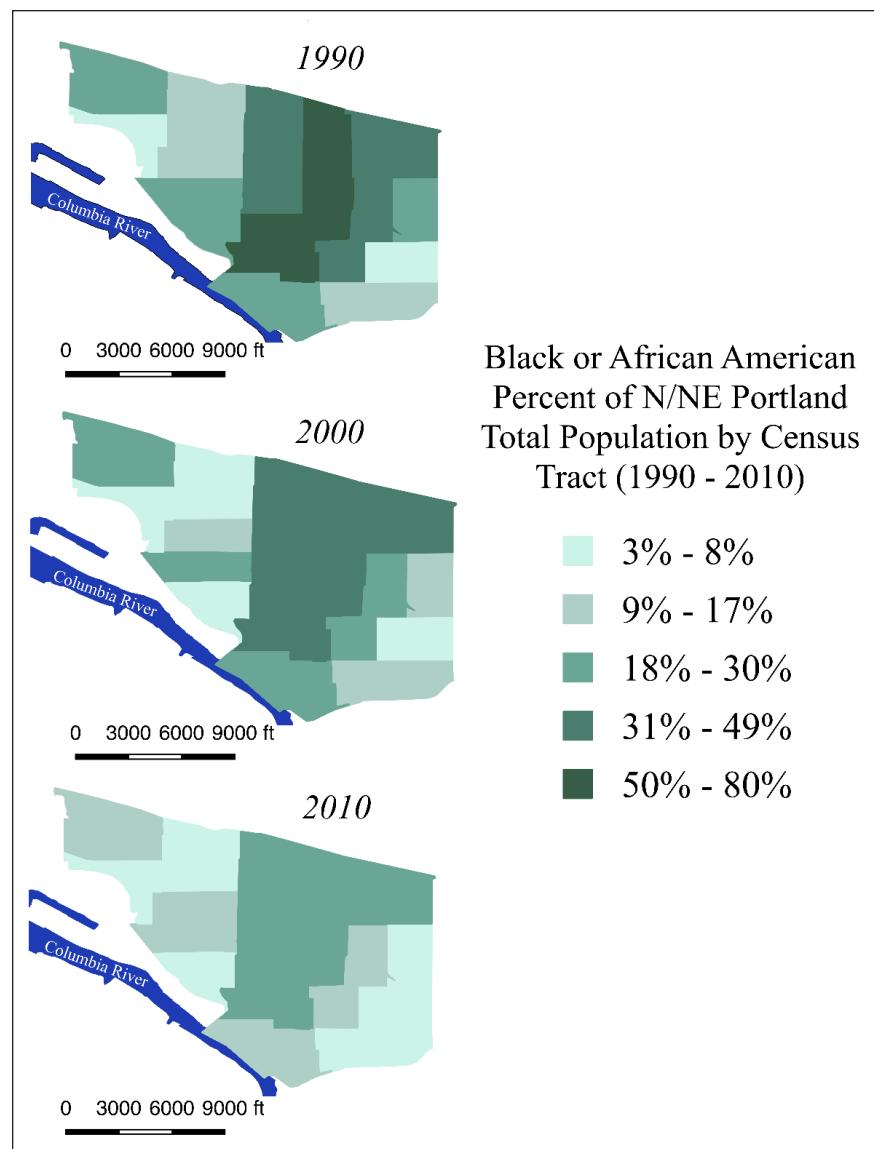


Figure 2.—Shifting race demographics associated with gentrification in N/NE Portland census tracts for 1990, 2000, and 2010. (Eric Fowler maps; data by Portland Housing Bureau 2014)

Table 1.—Changes in black or African American population, percentage of 18- to 34-year-olds in N/NE Portland, 1990, 2000, and 2010. (Portland Development Commission 2001; Portland Housing Bureau 2014)

Year	Percentage of blacks or African Americans in N/NE Portland	Percentage of population of 18- to 34-year-olds in N/NE Portland
1990	31%	27.6%
2000	25%	29.2%
2010	15%	33%

The Reel City: Representing Yipster Consumption

In the face of the gentrification described above, nonwhite residents in North/Northeast Portland neighborhoods like Albina have been increasingly ousted by influxes of gentrifying yipsters. Yet the area clinging remains home to relatively high numbers (for Portland) of black residents, retaining at least a modicum of its distinctly nonwhite cultural legacy. One would not know it watching *Portlandia*. Fred Armisen (of *Saturday Night Live* fame) and Carrie Brownstein (of the cult rock band Sleater-Kinney), the series' lead actors and writers, star in comedy skits that playfully mock a range of Portland archetypes, the city-defining characters identifiable by the would-be weirdness and palpable whiteness of their activities.

Let's take examples from *Portlandia*'s opening season. There's the annoyingly earnest yuppie couple who, dining at a yipster restaurant (winkingly named Gilt), are so concerned about the ethics of the poultry's upbringing that they, prior to ordering said chicken, insist on personally visiting the source farm, where, upon their arrival, they fall under the spell of boho-hunk farmer (played by guest star Jason Sudeikis) and subsequently become members of his sex cult. Then there are the passive-aggressive feminists who operate Women & Women First Bookstore (see Figure 3), exhibiting little interest in hawking their wares and instead intent on expressing opposition to all things patriarchy. There are the cloying crafters who, driven by the dictum to "put a bird on it," claim to transform everyday objects into urban folk art (see Figure 4). And there are the young professionals who, posturing rebellion against mainstream consumption patterns, prepare meals and attire themselves with the spoils—the gourmet throwaways you'd of course find in a progressive Portland dustbin—of dumpster diving.

And so on in this vein. You get the picture: quirkiness the target, privilege the arrow.



Figure 3.—Screenshot from "Women & Women First" skit (season one, episode six), *Portlandia*.



Figure 4.—Screenshot from "Put a Bird on It!" skit (season one, episode two), *Portlandia*.

Conspicuous—despite the carefully crafted ironic distance—consumption of the type described in a preceding section (re: yipster-oriented lifestyle amenities, i.e., superfluous) is a common denominator that undergirds the wannabe-weirdness enacted on *Portlandia*. The show's skit-based hijinks are also held together by a second common denominator: whiteness. If the inherent racialization of the action depicted in *Portlandia* were not obvious enough, we invite the viewer to peruse the pale countenances. Returning

to season one, Brownstein and Armisen are joined by a supporting cast (featuring a lineup deep in yipster-darling—vaguely edgy, well-known to a certain audience, but, of course, not *too* big—guest stars) that is glaringly white. Based on our viewing, the sole clearly nonwhite character permitted voice in the first season of *Portlandia* is the cellular phone sales associate (played by guest star Kumail Nanjiani) who, in episode four, overwhelms Fred and Carrie with calling-plan options and *gratis* ironic sunglasses.

Even though a preponderance of skits is set in Northeast Portland, again, home to the city's historic black neighborhoods, not a single black character is given a voice on season one of *Portlandia*. The circumstances under which black faces are represented—during the first season occurring in only two skits—are telling. Black Portlanders first appear when, in episode four, the off-kilter-of-course mayor (played in a reoccurring role by guest star Kyle MacLachlan) mysteriously goes missing. Carrie and Fred scour the city in search of the leader. When finally finding the mayor, in a neighborhood bar in Northwest Portland, they discover his “dark secret”: He moonlights as a soul patch-wearing bass player in an otherwise all-African American “real roots reggae” band (see Figure 5). Scandal ensues, and the mayor comes out as “openly reggae.” The gag is decidedly not intended to bring some focus to a place's black heritage, set as it is in Northwest rather than Northeast Portland and depriving all nonwhites of any voice. Rather, the point here is to elevate the political figurehead's quirkiness through the posited ran-



Figure 5.—Screenshot from “Mayor is Missing” skit (season one, episode four), *Portlandia*.

domness (re: nonwhite) of his secret act. Portland's weirdness is bolstered in the process of underlining the mayor's whiteness.

(By the way, the only other skit in season one of *Portlandia* to feature a black Portlander occurs in the sixth and final episode, when Fred and Carrie are charged by the mayor to field a professional baseball team. The sole African American recruit appears briefly and, like the reggae musicians before him, is denied voice.)

Portlandia's representations of what fundamentally are patterns of yipster consumption, as we've intimated, take place against a variegated local geography. Each skit generally is introduced with locational information, usually including the city quintant and sometimes the street(s) where the action takes place (see Figure 6). The purpose here for the makers of the series is to establish *bona fides*, an aura of authenticity. This device, however, is but an illusion of urban intimacy, one that lacks any real sense of social-spatial history. Gauging *Portlandia* as a work in its portrayal of Portland's people/places/spaces (Aitken and Dixon 2006, 330), the sample of skit locations presented in Figure 7 outlines a section of the geographic distribution of the show's cinematic landscapes located specifically within the Northeast neighborhood quintant of Portland. The aim of this graphic is to frame the geographic realism of *Portlandia*.² Given the range of NE Portland spaces depicted in this program over its first three seasons, a purposive sampling method guided the selection of in-show locations set in this area because



Figure 6.—Screenshot from skit opening (season one, episode two), *Portlandia*, with locational information.

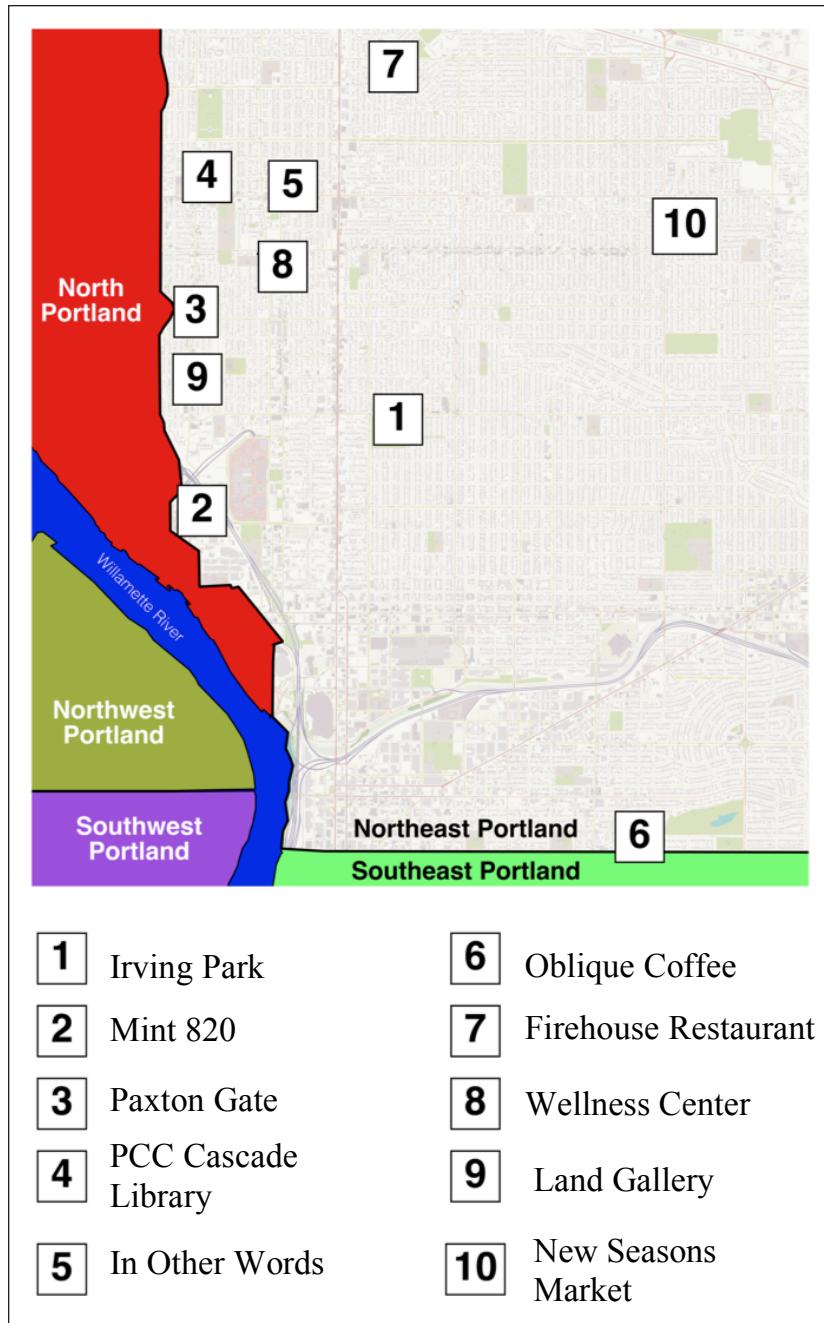


Figure 7.—Geographic distribution of ten NE Portland locales depicted in *Portlandia*. (Eric Fowler map)

this method is suited particularly well for interpretive qualitative research (e.g., filmic geography, textual analysis) and befits finding a “closely defined group for whom the research question(s) will be significant” (Smith 2007, 56). Our purposeful sample was therefore chosen because of how its included locales’ onscreen representations are seen to be collectively focused toward emphasizing the weirdness, whiteness, and yipsterism of Portland’s nationally perceived image.

Appealing to a customer base of high-income urban elites, amenity establishments (e.g., artisan ice-cream shops, boutiques, upscale bars, restaurants, coffeehouses, “yuppie chow” eateries, and natural food stores) began to rapidly open for business in NE Portland in the early 1990s and have continued this artisan economy-bolstering momentum into the present day (Coffman et al. 2007; Shaw 2005). Characterized in both their ability to afford increased commercial rent in gentrifying neighborhoods and their costly range of products and services, amenity businesses contribute to the displacing effects of gentrification by further increasing the appeal of gentrified areas to wealthy in-migrants and decreasing accessibility of these areas to the working class (Reid and Adelman 2003). With sites ranging from the Mint 820 Pan American Bistro and the Firehouse Restaurant, to New Seasons Market, the North Portland Wellness Center, and the fictional Artisan Knots store,³ an initial examination of the sample of cinematic spaces displayed in Figure 7 first articulates that the series’ depictions of NE Portland largely revolve around amenity businesses.

In outlining the precise years that these establishments opened within NE Portland, Table 2 bolsters an assertion that *Portlandia* singularly represents amenity businesses in its portrayal of the “concrete city.” Data within this chart’s Opening Year column indicates that all these depicted businesses emerged amidst the span of gentrification (1990-present) that has occurred in the Northeast quintant area. That said, *Portlandia*’s representation of the varied placemarks, as shown in Table 2 and Figure 7, act to valorize the weirdness, whiteness, and yipsterism of this gentrifying NE Portland area in its seeming devotion to primarily depicting establishments that contribute to the city’s artisan economy. In denying representation to such thriving and popular businesses within NE Portland’s expansive Albina district that have historical claim to the NE quintant as Clyde’s Bar (a famed jazz venue) or Billy Webb’s Lodge (which served the African American community as a YWCA, a United Service Organization club, and temporary refuge for those fleeing North Portland’s infamous 1940 Vanport flood), *Portlandia* presents an oh-so-narrow viewpoint of NE Portland that focuses primarily on the

area's yipster-centric amenity businesses or "consumption amenities" that have proliferated as a means as well as outcome of gentrification in divested areas (Papachristos et al. 2011, 218).

Table 2: The table shows when the amenity establishments depicted in Figure 7 were opened in NE Portland, a period coinciding with the area's gentrification.

Placemark on map	Northeast Portland amenity business	Opening year
3	Paxton Gate (setting for Artisan Knots store)	2006
4	Mint 820 Pan American Bistro	2003
5	In Other Words (setting for Women & Women First feminist bookstore)	1993
6	Oblique Coffee Roasters	2007
7	Firehouse Restaurant	2008
8	North Portland Wellness Center	2007
9	Land Gallery (setting for "Put a bird on it!" store)	2009
10	New Seasons Market	1999

Given *Portlandia*'s power and far reach as a national television series, its narrow portrayal of Northeast Portland's locales can be seen to normalize the existence and cultural role of amenity businesses in the popular imagination as a neo-bohemian playfield of consumer capitalism—wherein consumption of cutely odd products and services and oddly cute antics unrelentingly unfold. In this context of *Portlandia*'s representations of NE Portland amenity businesses, textual analysis indicates that the series does work in abetting the marginalizing effects of gentrification in its (1) near-complete denial of onscreen representation for the gentrified populace (i.e., black Portlanders) and (2) its parallel over-emphasis on the relationships, consumption habits, desires, anxieties, and activities of yipster (i.e., white) gentrifiers. This renders *Portlandia* to be not only a purveyor, but also a glorifier of a specifically market-based "Keep Portland Weird" weirdness that is, amid the yipsters' calculated consumption of luxury items like organic food from Zupan's Market (season two, episode three) and New Seasons Market (season one, episode three) or artisan knots from—of course, where else?—the Artisan Knots store (season two, episode eight), all but stringent upon an amenity economy.

Conclusion: Weirdness and Whitewash

Like the Willamette River on the muddied heels of a rainstorm, unquietly flows the slogan: "Keep Portland Weird." Go there, witness yourself a case of place-branding that, if only for its ubiquity on the cityscape, seemingly should somehow be off-putting in an urban environment of such purported progressiveness: "Keep Portland Weird." It is this dictum whence *Portlandia* sucks in creating its namesake "real city." Quirkiness, oddballery, etc. The imagined burg-defining weirdness plays out on a yipster-oriented adult playground specially designed, as addressed in the foregoing section, to valorize amenity-based cultural consumption. The would-be archetypal onscreen Portlanders share a whiteness that is underscored by a certain privileged sincerity, laced with willful naiveté and passive aggression. This is where the makers of *Portlandia*—along with, we would contend, their audience—presume themselves to diverge from the yipsters created on-screen. Though doubtlessly affectionate toward the show's well-intentioned, privileged characters—and of course toward Portland itself—Armisen, Brownstein, and colleagues conform to prototypical yipster posturing in that they are way too in-the-know for full-on sincerity: They are semi-sincere, but more so semi-ironic.

The equation somehow all adds up for them, allowing a moral distance whence to launch their guffaws. The folks behind *Portlandia* (and, again, those viewing it) can, through their ironic distancing act, laugh guilt-free while preference is given—on the screen, on the ground—to *their* claims to Portland. And preference to *their* claims to Seattle. And to San Francisco. And to Boston. And to New York. And to Washington, D.C. And so on (see Cheney-Rice 2014).

Their moral distance might go unremarked were it just necessity in service of hilarity. After all, it's just innocent skit-based comedy, right? Perhaps. If, drawing on the characterization of whiteness being "on a toggle switch between 'bland nothingness' and 'racist hatred'" (Painter 2015), we could accept the proposition that *Portlandia* is more unambiguously tethered to the innocuousness of the former than disturbingly trending toward the violence implicated in the latter. This is the sort of proposition that the show's creators might have you believe. But *Portlandia* cannot be separated from the "real city." And those with any historical knowledge of Portland (and Brownstein and Armisen certainly stand among their numbers) are cognizant that although, yes, the city is very, very white, its whiteness is geographically uneven and de-centered in significant, if spatially limited, pockets—North/Northeast pronounced among them. They are also

cognizant that Northeast has been ground zero for a quarter century of gentrification that has resulted in the replacement of black Portlanders by a new, white population. As examined above, Northeast figures prominently, explicitly in *Portlandia*, yet viewers are given no hint of its historical and enduring, though increasingly marginalized, blackness. All we are permitted is onscreen representations of gentrification's white artifacts: the new places of yupster amenity consumption.

In hiding—whitewashing—the processes of gentrification, *Portlandia* is a work that does work; it is an active agent in that selfsame gentrification, tilting, in spite of itself, away from bland nothingness or innocuousness toward the other side of the whiteness spectrum.

Notes

1 Filmic geography refers to a “theoretically informed, practice-led” subfield of the geography discipline which sees film as a “research method and publication” that relates geographic concepts (Jacobs 2013, 715).

2 For purposes of this investigation, “geographic realism” refers to a consideration of which real-life Portland locations are presented. Identifying these existent locations within *Portlandia* content confirms, to a degree, the realism or accuracy of the series’ representation of Portland.

3 The Artisan Knots store is based in reference to Portland’s real-life Paxton Gate, a self-described eccentric gardening store that sells an array of “treasures and oddities inspired by the garden and natural sciences” (Paxton Gate 2018). Indeed, Paxton Gate now boasts on its website that “the hit television show *Portlandia* filmed a particularly memorable episode” (*Ibid.*) in their establishment, thereby invoking the show’s popularity to leverage the marketability of weirdness.

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Direct Experience in the American West

Nicholas Perdue
Humboldt State University

Introduction

WHEN NEWS BROKE that a group of armed militants had seized the headquarters of the Malheur National Wildlife Refuge on January 2, 2016, many people around the country grasped for context in order to understand what was happening and why. What they may have found is that the refuge and its surrounding areas of Harney County are spaces in which issues of federal lands, ecosystem conservation, rural economics, libertarian politics, indigenous rights, and human-animal relationships converge in a unique, but not entirely isolated, way in the broader geographic region of the American West. But understanding these convergences at particular sites in more than superficial ways, especially for people not from the rural intermountain west, requires time spent sitting high in the desert mountains or driving down endless dirt roads. It requires listening to locals as they share a sense of place and a careful study of the plants and animals that encode the stories of the landscape. It requires, in short, direct experience.

Universities too often consider learning opportunities such as fieldtrips as budgetary inefficiencies, putting at risk one of the cornerstones of geographic education. The purpose of this paper is to document a September 2017 fieldtrip to the Malheur National Wildlife Refuge and Steens Mountain Wilderness Area in southeastern Oregon that allowed for Humboldt State University students to experience the unique history, geography, ecosystems, and politics underlying the Malheur occupation and the greater region. In doing so, this paper advocates for fieldwork as a pedagogical strategy in geography courses, illustrating how direct experiences from multiple perspectives lead to a more nuanced, culturally inclusive, and deep reading of the landscape.

Direct Experience as a Mode of Learning

Field-based and experiential courses have traditionally been important in geography undergraduate and graduate curricula, and many argue that they remain a defining feature of the discipline and an important pedagogical strategy (Fuller et al. 2006). Research has shown a causal relationship between field opportunities and deep learning practices (Boyle et al. 2007). Moon (2004) characterizes deep learning as internally motivated practices,

steeped in critical thinking and a sense of ownership. Hope (2009) clarifies the distinction between deep learning and traditional assessment-based learning, stating: “In contrast surface learning has an external motivation; it feels like an imposition, and tends to be uncritical and lack an understanding of the bigger picture underpinning particular assessment task” (170). Higgett (1996) links deep learning through field-based practices with student affective responses such as attachments to the subject, emotional resonance, and value-based assessments of place across multiple scales.

Many geographers show that field-based pedagogies allow students to develop both subject-specific and technical skills (Andrews et al. 2003) as well as interpersonal and cooperative project-managements skills (Boyle et al. 2003; Gold et al. 2003). Fieldwork also encourages active forms of learning (Kent et al. 1997), allowing students to connect theory with real-word experiences and fostering intellectual curiosity about the sites of fieldwork that can lead to unexpected connections (Fuller et al. 2006). Recent research has shown that fieldwork and direct-experience learning opportunities can support student mental health and well-being through community building and shared experiences (Conradson 2016). Similarly, Holton (2017) advocates for the pedagogical value of fieldwork in creating aesthetic connections between people and place, suggesting these connections allow students to become more self-reflexive about their own role and personal investment in being a learner in the environment. And Thomas and Munge (2017) argue that fieldwork provides the opportunity to integrate new technologies and learning activities into a curriculum and allows educators to witness in real-time the success or failure of new approaches.

Yet geographic fieldwork should not be viewed as an unbiased or unprivileged practice, and educators should be mindful of the inclusive/exclusive practices associated with field-based learning (Nairn 2002). Educators must be conscious that the “going to see the world for yourself” (Hope 2009: 170) model of fieldwork is a practice of viewing reliant on the assumption that an unmediated, objective truth is visible (Rose 1993). Historically, the so-called “mud on your boot geographer” has entered the field not as an unbiased observer, but as one encountering the world through a socially constructed filter deeply rooted in colonialism, conquest, and the privilege of uncontested mobility through the environment. Nairn (2005) calls this a naïve epistemology, based on “the assumption of the unmediated presence of the truth of nature, that the truth or reality will be transparently available to students if they experience a situation rather than read about it” (294). She warns that entering the field with this mindset can fail to challenge student views and

ultimately reinforce preconceived notions of otherness. She concludes by arguing that educators must address the geographic and historical processes that position the subjects encountered in the field beforehand in order to situate the experiences of the students within the appropriate context.

While Nairn (2005) and others (see Abbott 2006; Herrick 2010; Hughes 2016) draw attention to the subjectivities embedded in viewing another environment and are cautious not to exaggerate the impacts of geography field-based courses, their intent is to encourage proper framing of the experience rather than discouraging the practice outright. Hope (2009), for example, advocates for more individualized frameworks, noting the same experience can be transformative to some students and not to others, and agrees that thorough contextualization in the classroom beforehand and strategic one-on-one conversations in the field can lead to more widespread and consistent transformative impacts across the participating students. In our case, we addressed this issue and provided historical and geographic context for the trip by providing a selection of required readings from *High Country News* and Oregon newspapers as well as listening to podcasts from Oregon Public Broadcasting in the vans *en route*.

Malheur, Harney County, and the Occupation

In September 2017, in an interdisciplinary collaboration between the geography and wildlife departments at Humboldt State University, students traveled to the desert mountains of eastern Oregon to experience the Western landscape and learn about how the relationship between rural politics, environmental processes, and wildlife habitats shapes the American West. The Malheur National Wildlife Refuge, with an entangled history of white settlement, ecological conservation, and cowboy economics that can be directly traced through history to the recent occupation, served as an ideal landscape to experience this unique set of geographic relations in the Intermountain West. The goal of the interdisciplinary field courses, taught in parallel by one human-geography professor, one physical-geography professor, and one wildlife-ecology professor, was to allow students from both majors to place their studies into a new context by interacting and sharing discipline-specific knowledge with each other, constructing multiple ways of seeing the world within one experience. Our assumption going in was that fostering this interdisciplinary conversation would allow students to converse and learn from each other as they moved between scales of analysis ranging from the landscape to the individual species of animal.

Malheur National Wildlife Refuge

- One of 550 refuges in the National Wildlife Refuge System.
 - Established in 1908 by President Theodore Roosevelt to protect bird species decimated by hunters collecting feathers for the hat industry.
 - Encompasses 187,757 acres of wildlife habitat along the Pacific Flyway.
 - Provides resting, breeding or nesting habitat for 320 bird species, along with other forms of wildlife.

Sources: ESRI, U.S. Fish & Wildlife Service

MARK NOWLIN /
THE SEATTLE TIMES

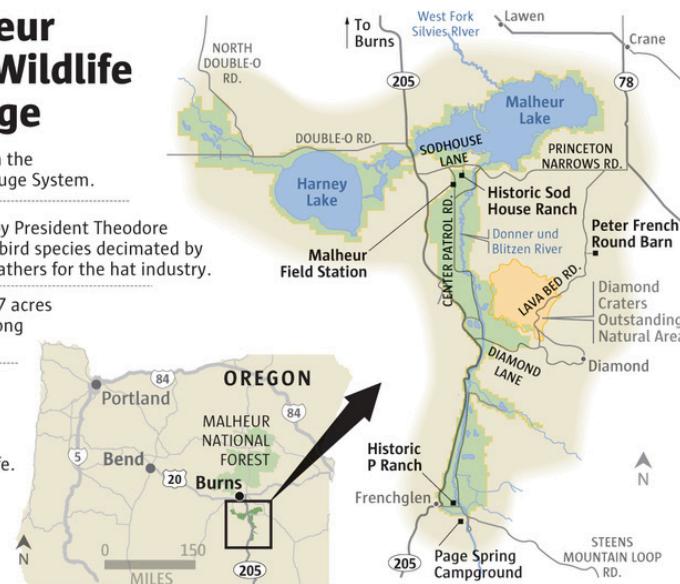


Figure 1.—Map of Malheur Wildlife Refuge. (Mark Nowlin map, Seattle Times)

During this trip, we camped and experienced the remote high desert of southeastern Oregon together, had conversations with Refuge staff, people from the Bureau of Land Management Staff, and an elder member of the Burns Paiute Tribe to understand more about the history of the area and local views on the recent conflict, and spent time in observation to learn about ecosystem restoration and wildlife habitat through direct experience. During the trip, we required students to read the landscape of a particular location, documenting with text and visual images how a particular site of interest reveals a unique intersection of cultural, historical, and ecological processes.

In many ways, the Malheur National Wildlife Refuge serves as a perfect field trip location to study the interconnectedness of human and physical geography. Located in arid southeastern Oregon, the Malheur Basin was home to one of largest cattle empires in the country in the late nineteenth and early twentieth century. After years of unregulated hunting and environmental alterations in the Blitzen Valley, including the channeling of streams and draining of wetlands, migratory waterfowl population was in steep decline. The Malheur National Wildlife Refuge was established in 1908 and expanded during Great Depression recovery programs with intensive restoration work. From the beginning, there was opposition to the refuge and all federally owned land in the area, rooted in the belief that the refuge was a government overreach, a tool for rich urban East Coast elites to take

money from poor rural ranchers and cowboys: "Much of the opposition to the refuge had been, at least on the surface, on economic grounds. Locals had warned that the refuge would take land out of the economic tax base and also put an abrupt halt to development" (Langston 2003, 96). This narrative continues to this day and is the primary libertarian philosophy underpinning the Malheur Occupation and cowboy economics more broadly.



Figure 2.—Buena Vista Overlook at Malheur National Wildlife Refuge. (Josh Shindelbower photo)

Although remote and with specific conditions unique to the area, the Malheur Basin possesses myriad ecological and political conditions indicative of the entire Intermountain West. This includes a complicated history with the indigenous population in which a genocidal past folds into contemporary land use/land rights arguments that exclude entire populations. The area has a unique cooperative rangeland management system, a wild horse population that threatens the local sagebrush environment, and one of the largest freshwater marsh ecosystems in the western United States, which serves as a critical stop for migratory birds on the Pacific Flyway. The collection of these factors, along with the recent history, creates an ideal site for direct-experience geographic education.

Field Experiences

The direct field experience in the Malheur Wildlife Refuge area allowed students not only to put the recent occupation into context, but also to gain

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an appreciation of the deeper history and hidden undercurrents of conflict within this region and more broadly across the American West. Due to the sensitive nature not only of the Malheur occupation and the continuing residual impacts on the local community, but also the broader debate that has recently emerged about the role of the federal government in Western land-use policies and practices, this recount of the fieldtrip will focus less on specifics from the conversations that we had with a host of local experts and instead focus on transformational aspects and unique insights from the experience.

One such instance was during our visit to the Refuge Headquarters, where we were able to witness the site of the occupation and get a sense of the unique geography and cooperative land-management practices of the Refuge and surrounding areas. As with many other rural western counties, the federal government is simultaneously the largest employer in Harney County and a target of widespread resentment from within the community, most notably in debates about the regulations detailing how, when, and by whom cattle grazing is permitted on Refuge grounds. Being at the Refuge allowed us to observe the landscape and put into context the contesting claims of the space, one of which favored scientific analysis and environmental management practices while the other oriented toward the ranching tradition, neoliberal economic structures, and the minimization of scientific findings. Longcore wrote in his 2016 op-ed, “[t]he armed takeover of Malheur National Wildlife Refuge is, therefore, not just an attack on a federal property. It cuts deeper than that. It is an attack on the modern science-based approach to land management and it is an attack on the value and worth of science and scientists in the United States.” Our visit to Refuge Headquarters reinforced the land use politics we had discussed in class prior to the trip, while engaging students in active forms of learning and full sensory experiences of the environment. We could see firsthand the management practices of the grasslands, read interpretive signs about the sediment accumulation and invasive carp species in the lake, and hear the sounds of birds as they passed over us. This experience gave deeper value to the hard scientific land-use management work people do in the unforgiving rangelands of the Great Basin.

We were able to further explore the politics of land management when we first arrived in the greater Malheur area and were making our way up Steens Mountain Road on the way to our campground. During this trip we came across the famous “Hollywood Herd” of wild horses, named so for their familiarity with people and apparent willingness to pose for pictures. The scene was a surreal experience, one that caused us all to pause with a

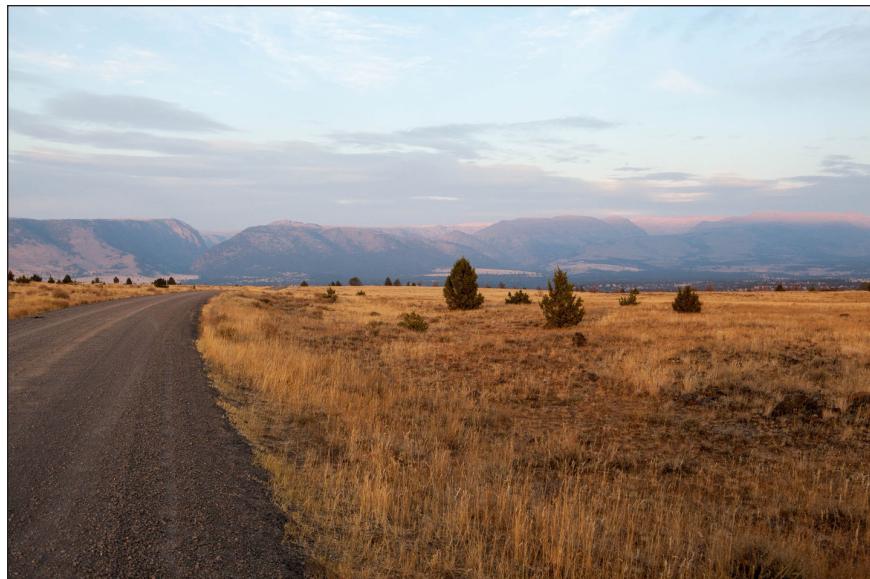


Figure 3.—Road to South Steens Campground. (Josh Shindelbower photo)

sense of wonder and awe. In many ways, wild horses are the quintessential symbol of the American West, deeply entrenched in cowboy mythology, romanticism, and a sense of freedom. We sat and watched the horses for some time, witnessing firsthand what we would later learn to be a microcosm of the complicated story of land use in the American West.

The Wild Free-Roaming Horses and Burros Act is one of the more controversial management practices regulated by the Bureau of Land Management. This act strives to maintain an ecological balance of horse population on rangelands and, with strict mandates against culling and exportation to foreign slaughterhouses, has resulted in the establishment of numerous holding pens across the West to absorb populations removed from federal lands. Even with a relatively successful adoption program, there are currently more than 67,000 horses on federal lands (three times the estimated range-land capacity) and an additional 49,000 in federally operated holding pens.

We entered this landscape at a contentious time for the wild horses, one where pushes for deregulation and potential massive changes to federal land-management practices have created political upheaval and an influx of contentious discourses. The issue of wild horse management is a deeply entrenched, complex problem that is not as simple as either side of the political debate makes it out to be. Horse advocacy groups claim that the BLM, despite explicit laws from Congress to protect wild horses, intention-



Figure 4.—Wild Horses in the Steens Mountain Cooperative Management and Protection Area. (Josh Shindelbower photo)

ally misleads the public about their impact, inflates population estimates, and are beholden to ranching special-interest groups. Advocacy groups promote new methods to reduce the fertility of wild horses, including field-based methods that do not require the herding of horses into a centralized facility, while the federal government argues that fertility control efforts are a failure and nearly impossible to carry out, asking for Congress to repeal regulations against the slaughter, exporting, and euthanasia of excess horse populations (2017).

The wild horse debate is one that cannot be easily reduced to the simple and most politically divisive discourse without directly experiencing the landscape in which these events are taking place. While the concept of field-based sterilization of horses on the surface holds promise to control the population on multi-use public land, the practice is controversial on both sides of the debate and requires the mobility of field agents across often vast expanses of remote, rugged territory. Only when immersed in the environment, seeing these animals, and getting a sense of the geography of the area do you get a true sense of the complexity of the issue. Direct experience in field studies allows for students to take in the romantic sense of grandeur and wonder that comes from watching wild horses run across the high desert grasslands while simultaneously witnessing firsthand how federal programs, regulations, and special-interest groups dictate socioecological relationships on the ground.

Reflections

Direct field experiences for undergraduate students provide the opportunity to learn in the world and potentially develop a nuanced understanding of complex social, cultural, and ecological issues. It is crucial that we continue to advocate for the integration of field experiences into standard curriculum and degree programs. Local- and regional-based field experiences are continuously threatened by a number of factors, including budget efficiency models, technological advancements in virtual fieldtrip models (Stainfield et al. 2010), resources being shifted toward long-haul study-abroad programs (McGuinness and Simm 2005), and increasing faculty-service obligations, collectively producing an uncertain future concerning field trips and direct-experience education.

In the case of this particular trip, the direct experience of the landscape and interactions with local actors were essential to put the 2016 occupation and larger issues surrounding the Malheur National Wildlife Refuge into a broader context. It can be hard, for example, to understand how scientific practices produce contested landscapes, to consider the complications of the wild horse debate without seeing the animals move through the environment, or to acknowledge multiple perspectives on place without having direct conversations with people. Experiences like this one are important, not only to help students achieve a more meaningful connection to the top-



Figure 5.—Students at the top of South Steens Mountain. (Dan Barton photo)

ical course material and stronger personal relationships with both faculty and other students, but to remind faculty of what fundamentally matters in education: passion, introspection, wonder, disorientation, complication, heartbreak, joy. It is critical that geography faculty continue to advocate for field experiences at multiple administrative and curricular levels to ensure not only greater student success and engagement, but also transformative life experiences and deeper understandings of the world.



Figure 6.—Sunset from South Steens Campground. (Author photo)

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Field Notes from South Korea: Local Development in the Land of Securitized Peace

Bridget Martin
University of California, Berkeley

Introduction

SOUTH KOREAN LANDSCAPES are profoundly shaped by the country's unending war with North Korea. Although the leaders of North and South Korea recently agreed to negotiate an end to the Korean War in the coming months, Korea's peace is tenuous and securitized, undergirded by massive military complexes on both sides of the border. From the anti-tank berms that cut through rice paddies in the northern border area to the United States military's Chinook helicopters that whiz back and forth delivering supplies to a remote missile-defense base in the south, it seems that no part of South Korea is free of reminders that the conflict between north and south is still unresolved.

When I first started a Ph.D. program in geography at UC-Berkeley in 2013, I was not curious about militarism; rather, I was focused on locally driven, large-scale, rural-to-urban real estate conversion projects that seemed to dominate South Korea. In the years I spent living in South Korea on and off prior to starting my Ph.D. program, I had noticed that local governments tended to take on extraordinarily ambitious development projects but often fell short of their objectives. Yet when I undertook a pilot study in 2015, I started to realize that, in addition to the large, systemic forces of state and capital, militarism was also shaping local development processes.

Following my pilot study, given my position as a U.S. researcher, I decided to change my research focus to the question of how U.S. military infrastructures intersect with the kinds of local development plans in which I was interested. U.S. military infrastructures, such as bases, training areas, artillery batteries, and storage facilities, comprise only a slice of South Korea's total security landscape, but they have tremendous influence on local development patterns.

Today, U.S. infrastructures wield a different kind of influence than they did three or four decades ago. Whereas U.S. bases could previously serve as a

foothold for neighborhood economies, local governments today tend to support U.S. military projects only insofar as they come along with massive government subsidies that support non-military local development projects. Most local governments would prefer that the U.S. military return its installation lands, which would allow private developers to undertake new development projects there.

The South Korean central government in Seoul, however, does not normally consult local governments or take a democratic approach when it negotiates facilities placements with the U.S. In a pair of agreements reached in 2002 and 2004, the U.S. agreed to close thirty-seven military installations, including the Yongsan Garrison in Seoul and several bases near the North-South border. Meanwhile, the U.S. began preparing for a significant expansion of one of its two bases in Pyeongtaek. With so many communities affected by these transitions, Seoul faced backlash from multiple directions. Under pressure from the U.S., the central government attempted to solve its base-related political problems by enacting a string of local development schemes that had wildly disparate results.

Below, in this update from the field, I provide a brief tour of a few of the places most affected by the spatial reorganization of U.S. military infrastructures, focusing mostly on cities near Seoul (Figure 1).

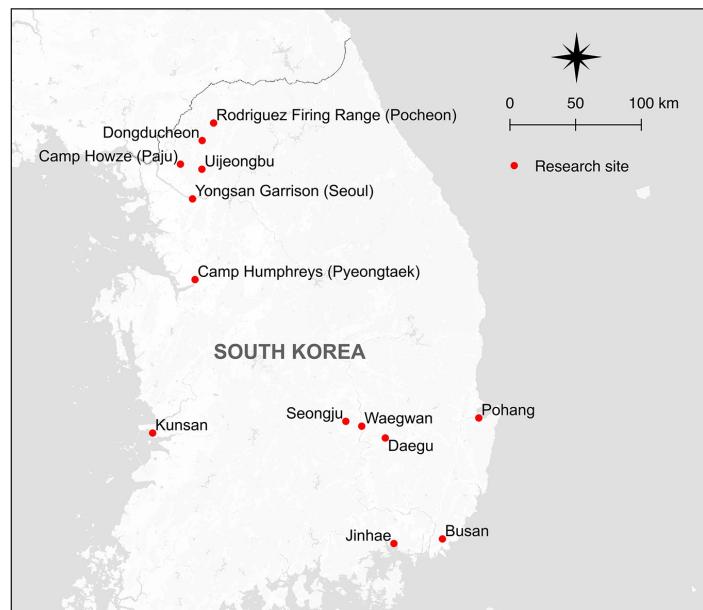


Figure 1.—Research sites mentioned in this article. (Author map)

Pyeongtaek

Initially, I chose to conduct a pilot study in Pyeongtaek because it was one of the fastest-growing cities in the country. It had a soaring real-estate market and several ambitious industrial-development projects that involved the kinds of large-scale, rural-to-urban conversions that piqued my interest. I was not planning to study the city's two major U.S. military bases. I had no framework within the field of urban geography for considering how foreign military infrastructures could form part of an urban landscape. However, as I interviewed the city's planners, developers, and residents, it became clear to me that I would not be able to understand the city's development without understanding the U.S. presence there.

In 2004, the South Korean central government announced that the U.S. planned to undertake a threefold expansion of Camp Humphreys, a helicopter base in Pyeongtaek. Hundreds of people, mostly elderly smallholders, stood to lose their land. The whole community in the base expansion area would be dispersed. At the same time, the U.S. planned to construct more than six hundred new buildings on the site and relocate thousands of U.S. service members, civilian workers, and their families there. Pyeongtaek would become the new “hub” of the U.S.-South Korea alliance (Figure 2).

With the announcement of the base expansion, major protests broke out in the city. Activists and residents occupied the Camp Humphreys expansion area, continuing to farm and live there against government orders until 2006, when they were forcefully removed in a violent confrontation with police (Yeo 2010).

While conducting my pilot study, I came to realize that Pyeongtaek's tantalizing new development plan, which involved multiple mega-scale projects, had a direct relationship to U.S. military-base expansion in the city. Worried about anti-base protests expanding, the local and central governments negotiated a massive, central-government subsidization and deregulation package aimed at sparking local development. After the local government introduced these development plans and rhetorically linked them to U.S. base expansion, approval for the base shot up among Pyeongtaek residents (Lee 2010).

In addition to concerns over land loss, many Pyeongtaek residents and officials have been worried that, with the introduction of thousands of Americans into the city, the area around Camp Humphreys would swell into a giant “camp town.” Camp towns are highly stigmatized U.S. military base



Figure 2.—New off-post soldier housing in Pyeongtaek. A chain of relationships make these developments possible: landowner-developers hire construction companies, who take the largest cut with the least risk; after construction, middle-class Korean property speculators purchase the properties; and U.S.-approved real-estate agents recruit American residents. Extractable rents available through the U.S. military housing allowance are determined only by size, not quality. (Author photo)

areas, initially formed during and right after the Korean War (1950–53), when thousands of desperate migrants fled to U.S. military base areas in search of U.S. soldier dollars. Camp towns, called “villes” by U.S. soldiers, cater mainly to soldiers spending money in the sex and entertainment industries (Shin 1991; Moon 1997).

The specter of the stigmatized camp town haunts Pyeongtaek. Keeping in line with neoliberal urban branding strategies prevalent around the country, the local government and local developers are fervently promoting the idea that the arrival of the Americans will give the city an international, cosmopolitan atmosphere. At the height of anti-base protests, the local government distributed leaflets promoting the idea that the city would be a hub of English-language education and foreign investment.

Border Cities

Since the 1980s and 1990s, peace activists and anti-militarism activists in South Korea have been calling for U.S. base closures, citing problems such as environmental pollution, soldier crime and gendered violence in camp towns, and taxpayer burden in maintaining U.S. installations (Moon 2012). The 2002 and 2004 U.S. promises to close several bases near the border were meant to address some of these criticisms, if only superficially; the U.S. had long desired to consolidate its troops and to move out of Seoul and the border area. As Seoul grew rapidly after the war, both the U.S. and Seoul acknowledged the tactical constraints of operating in Seoul. In the post-Cold War period, the Americans also wanted to shift their emphasis from ground power to air and sea power, which meant closing many of their border installations (Nam 2006; Kim 2017).

Returning to South Korea for fieldwork in 2017, I was eager to learn how the dynamics of U.S. military spatial reorganization were playing out beyond Pyeongtaek, especially in U.S. base closure areas. What did development-savvy local government officials think about the closures? How many installations were being closed? And what was happening on deactivated base lands and in old camp town areas?

Kicking off a new phase of fieldwork, I rented a car and headed for the border, starting in Uijeongbu, north of Seoul. Because South Korean cartographers scramble and intentionally misrepresent military bases on government-approved maps in accordance with national security laws, I initially had trouble locating American installation sites listed in the deactivation agreements between the U.S. and South Korea. In search of more information, I turned to a public, crowd-sourced mapping application. Not only had U.S. soldiers mapped both active and deactivated installation locations, but they had also nostalgically shared memories of their favorite hangouts in and around the bases.

After exploring the areas to the extent possible, I started to approach local planners and officials to ask specific questions about the way they were thinking about U.S. military installations. I expected local officials to express ambivalence toward or criticism of the U.S. presence in their cities. However, in our conversations, most of them were totally focused on how the central government, not the U.S., was handling the base conversion process. When their city had received subsidies from the central government, they were pleased. When they felt like the central government was ignoring them or the conversions were not going as planned, they organized local residents to

protest. They were demanding compensation for the economic losses their cities had suffered while hosting the Americans.

While Uijeongbu was a small agricultural community before the Korean War, the city now has a population of nearly half a million people, and it has taken on a new role as a suburb of Seoul. After the war, U.S. bases provided a stable economic foundation for the city. Today, U.S. soldier dollars are less important to the local economy than the real estate and service industries.

Out of seven Uijeongbu bases slated for return to South Korea under a 2002 agreement, the U.S. has returned five and still occupies two. Thirteen years after deactivation, the former Camp LaGuardia site in the middle of the city has seen no development except for the construction of a road that bisects the large swath of land (Figure 3). Brushing off the idea that Camp LaGuardia was a scar on the city's landscape, city planners in Uijeongbu assured me that all base conversions were proceeding smoothly—although the city was having trouble attracting investors for some of the sites.



Figure 3.—Disused lands of former Camp LaGuardia land in downtown Uijeongbu. The site is used partially as an illegal farm and as an illegal dump. The text on the fence reads, “Uijeongbu City.” (Author photo)

Delaying closure plans, the U.S. still occupies two bases: Camp Red Cloud and Camp Stanley. Camp Red Cloud was the headquarters for the 2nd Infantry Division, the first line of defense against a North Korean ground invasion, although its headquarters were recently relocated to Pyeongtaek.

City planners told me that they would like to convert the site into a U.S.-themed security tourism zone, although they have virtually no power in deciding whether and when the U.S. will return the base land. The U.S. also occupies Camp Stanley, on the outskirts of Uijeongbu, although this base is depopulated and serves mainly as a fueling station. Given the near lack of U.S. soldier dollars flowing through the economy around Camp Stanley, city officials are eager to see the return of this land.

Next to Camp Stanley, Bbaetbeol Village is a classic camp town (Figures 4 and 5). Until recently, Bbaetbeol was home to dozens of clubs catering to U.S. soldiers. In the 1970s, a complex network of traffickers, agents, and club owners controlled the movements of women working in the clubs: The village had only one access gate, which local pimps closed in the evenings to keep the women inside.



Figure 4.—Shuttered Bbaetbeol camp-town club outside U.S. Camp Stanley. (Author photo)



Figure 5.—Shuttered Bbaetbeol camp town clubs outside U.S. Camp Stanley.
(Author photo)

While the number of Korean women working in camp towns like Bbaetbeol dropped in 1980s and 1990s, Filipina women started migrating to South Korea, ending up in camp towns. Many of them came to South Korea seeking jobs as waitresses and singers. But the women found themselves tricked by international employment agents and trapped in precarious economic, legal, and romantic situations (Chen 2013).

Heading north, after Uijeongbu, Dongducheon was my next stop. Because the last Bbaetbeol club closed in 2017, some of the Filipina women I met in Bbaetbeol had recently started working in Dongducheon's camp town. As I learned visiting them one evening at their new club, their Dongducheon bar owner, or "mama," requires them to spend time with their American customers both inside and outside the club. Club owners nickname this practice, which builds customer loyalty and subverts anti-sex work laws, "the real girlfriend strategy."

A city of around ninety-thousand people nestled between rugged mountains near the border, Dongducheon faces a different set of challenges from those of Uijeongbu. Rather than dealing with the return of vast amounts of deactivated U.S. base land, the main concern of officials in Dongducheon is

the ambiguity surrounding the timeline of U.S. base returns. According to agreements between the U.S. and South Korea, all six bases in Dongducheon, which for decades occupied 42 percent of the city's area and the vast majority of its flat, plannable space, should have been returned a dozen years ago. However, the U.S. still occupies its two largest bases in the city and has delayed plans for the return of the lands, arguing that it needs to maintain infantry troops close to the border.

Intrigued by Dongducheon's relationship with the U.S., I returned to the city at the end of 2017 and remained there for two months. In a series of meetings, frustrated city officials told me that plans for demilitarization—which for them means access to more land—have faced a number of setbacks. First, in 2004, the U.S. suddenly deployed thousands of soldiers from Dongducheon to Iraq, leading to a severe drop in soldier population and a loss for local businesses. While the community has depended on U.S. soldier dollars for decades, from this moment onward the land was a more valuable asset than the remaining American consumers.

Local Koreans were again enraged when the U.S. and South Korea announced in 2014 that the U.S. would delay deactivations until "around the year 2020," when South Korean forces could develop their own counter-fire reinforcements at the border and assume wartime operational control of the South Korean military (the U.S. currently has wartime command).¹ U.S. military public affairs officers refused to talk with me about their plans to leave Dongducheon, but in informal conversations, several Americans living and working on U.S. bases in the city told me that it might take decades before the U.S. withdraws. As it stands, the city is blocked from undertaking any alternative local-development strategy. Security-related land-use restrictions also inhibit development possibilities.

In meetings over coffee on the base or while driving around its perimeter, local officials in charge of planning the conversion process repeatedly rehearsed a litany of complaints against the central government. They pointed specifically toward the fact that while the central government has provided generous compensation to Pyeongtaek, it has provided Dongducheon with virtually no compensation (Figure 6). On top of this, the city has lost decades of tax revenue on its most valuable lands, which the U.S. occupies.

Further, if—and when—the U.S. returns the installation lands to South Korea, it is the central government, not the local government nor any other party, that will retain ownership of the land. This means that Dongducheon,



Figure 6.—Protest sign in downtown Dongducheon reading, “Quickly follow through on the state-promised industrial complex!” (left) and “The US military base has been stationed here for 66 years! The state must provide compensation!” (right). The person who erected the sign—a local property developer—told me that the city government provided him with the ad space for free, and that the sign will remain indefinitely. (Author photo)

or possibly a private developer, will have to repurchase the land, paying market rate. According to a special law created in part to appease leftist critics of South Korean military expenditures, funds from these land sales will be sent directly to Pyeongtaek for the Camp Humphreys expansion.

Even if the U.S. does return the installations lands, Dongducheon and other military host cities face yet another problem: The U.S. refuses to participate in the environmental decontamination process. According to the 1966 Status of Forces Agreement (SOFA) between Washington and Seoul, the U.S. has no legal responsibility to contribute to cleanup costs. Activists call for SOFA amendments on this point and many others.

Facing a similar set of problems, Paju, another border city, is seeing vast swaths of former U.S. military land sit idle and polluted. The U.S. managed to deactivate and return six large bases in Paju in 2005, on schedule according to bilateral agreements. Yet, a dozen years on, almost no development has been completed on these sites. At least two university satellite campuses had been slated for different sites, but the educational institutions canceled their projects for financial reasons.

Accompanied by two Korean friends, I visited one of these deactivated bases, Camp Howze, during my northern tour. Outside of the installation, which was established by the U.S. during the Korean War, my friends and I found a hollowed-out camp town called Bongilcheon Village. Small, one-story homes lined the streets, along with shuttered nightclubs, currency exchange shops, and shoe repair and tailor shops with signage in English and Filipino.

In the mostly deserted village, we met two elderly women peeling garlic, sitting on a makeshift platform on a narrow footpath. One of the women told us that, for a while in the late 1990s, she had rented out a room in her home to two Filipina women who worked in Bongilcheon camp town clubs. Yet U.S. soldiers continually came looking for the two women, knocking on her front door even long after the Filipina women had departed for good. The elderly Korean woman could not speak with the soldiers; she told us the only English word she knows is “okay.” She grew so tired of soldiers coming to her door, and of hearing their footsteps outside, that one day she blocked off her front door with bricks. She now uses an alternative entrance (Figure 7).

To our surprise, the two elderly women on the footpath also told us that we were free to enter Camp Howze. We had spent the previous part of our day locating former U.S. base sites, but we had confronted access barriers such as fences and alarm systems. The gate to Camp Howze, however, was wide open. Inside, my friends and I discovered abandoned U.S. buildings with smashed-out windows, presumably made unusable to prevent squatting (Figure 8).

Pocheon, located northeast of Seoul and east of Dongducheon, is not home to major U.S. bases, but instead to several firing ranges, including the large Rodriguez Live Fire Complex. Locals live with the sounds of bombs exploding and guns firing just on the other side of the imposing Rodriguez range walls. Occasionally, stray shells and bullets escape those walls and land in nearby villages, damaging homes and endangering locals. With each incident, villagers living near the firing ranges demand meetings with U.S. commanders, and they demand compensation from Washington and Seoul. In response, the U.S. makes incremental safety improvements, but nothing fundamental has changed in recent years.

Unlike Pyeongtaek’s new “international city” image, there is no glossy marketing campaign or promise of economic growth that can mask the bare militarism of a live fire complex.



Figure 7.—House with brick door in Bongilcheon Village. (Author photo)



Figure 8.—Abandoned U.S. military building inside deactivated Camp Howze. (Author photo)

Conclusion

In discussing a few key sites around Seoul, I have only scratched the surface. U.S. military infrastructures affect communities all over the country. The impending conversion of the U.S. Yongsan Garrison in central Seoul to an urban park has sparked an entire substratum of debates about the tangible legacy of the U.S. military in the South Korean capital city. Meanwhile, the U.S. network of bases extends not only northward toward the border, but also southward into Pyeongtaek, Kunsan, and the southeastern part of the country. The U.S. has no significant plans to withdraw from Busan, Jinhae, Daegu, Waegwan, Pohang, or Seongju.

In fact, the U.S. recently expanded its presence in the southeastern part of the country with the controversial deployment of the terminal



Figure 9.—Soseong Village convenience store, near the THAAD deployment site in Seongju County. (Author photo)

high-altitude area defense (THAAD) missile interceptor system. In 2017, the South Korean government defied the wishes of local people in Seongju County and approved THAAD deployment on a golf course.

I spent a month living among anti-THAAD activists near the deployment site. I learned that, at first, they had objected to the missile defense technology on the grounds that the system's powerful radar would have adverse health and environmental effects. Their critiques quickly expanded, however, when they started to believe that the technology was not meant to protect South Korean people from North Korean attack, but to expand the surveillance reach of the U.S. into China and Russia. They argued that the central government, under pressure from the U.S., was ignoring the voices of its own citizens. The THAAD case exposed the limits of South Korean democracy under the conditions of securitized peace (Figure 9).

Early one day in September 2017, I happened to be on the train for a short visit to Seongju. That same day, the Moon Jae-in government suddenly announced that a U.S. caravan would deliver four truck-mounted THAAD launchers to Seongju within the next twenty-four hours. Right after I ar-

rived in Soseong Village in Seongju, 8,000 police officers descended on the village and lined its streets. Locals, many of them elderly, frantically set up road blocks and began chaining themselves together and clinging to the bottoms of police tow trucks. As the day wore on into night and then morning, I watched a sixteen-hour showdown between tearful locals and young conscripted police officers in the village. By mid-morning, the road to the golf course-turned-THAAD deployment site was clear, and the U.S. caravan was passing through. Documenting this violent event was the most difficult and emotional moment in my fieldwork so far (see Martin 2017).

In relocating its headquarters from Seoul to Pyeongtaek and maintaining its southern bases, including the THAAD battery, the U.S. military in South Korea is, in essence, transforming itself into a rear support and logistics force. On the one hand, the transition is in line with joint South Korean and U.S. plans to transfer wartime operational control of the South Korean military to South Korea by pulling away from the border. On the other hand, multibillion-dollar infrastructure investments in Pyeongtaek and elsewhere indicate that the U.S. intends to stay on the Korean peninsula for the next several decades, whether or not reunification with the north happens. On top of U.S. government desires to maintain a forceful presence in East Asia, the U.S. also answers to private industries: Korea's securitized peace is big business for military contractors and weapons manufacturers.

In South Korea, militarism is not only an ideology—it is also a set of social and technical relationships that permeate and shape concrete space. At times it presents itself as a normal part of everyday life, blending in with real-estate markets and shopping boulevards and exciting multicultural scenes. And at other times, it disrupts everyday space, bringing 8,000 riot police and truck-mounted launchers into a quiet village. Heading into the thick of 2018, I hope it does not bring a more catastrophic trauma to the Korean peninsula.

Notes

1 Joint communiqué, the 46th ROK-U.S. Security Consultative Meeting, October 23, 2014, Washington, D.C.

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Bridget Martin is a Ph.D. candidate in the Department of Geography at UC-Berkeley. Her research explores the relationship between militarism and local development in South Korea and focuses especially on cities and towns hosting U.S. bases and training areas. She has been studying South Korean development practices since 2012, when she conducted research on the country's free economic zones for her master's thesis in Politics at The New School for Social Research. Her most recent fieldwork was made possible through the generous support of the Korean-American Education Commission (Fulbright Korea), the Korea Foundation, and the Center for Korean Studies at UC-Berkeley.

Field Notes from Kyrgyzstan: Bishkek's New Religious Landscapes

Matthew Derrick
Humboldt State University

I ARRIVED LAST SEPTEMBER in Bishkek, the capital city of Kyrgyzstan, to begin a yearlong sabbatical researching new religious landscapes in this enclave of Central Eurasia. As geographers are wont, I spent those first weeks afoot, familiarizing myself with the city's contours, its boulevards, squares, side streets, and alleyways, along the way gawking at the monumental Mahmud Kashgari (see Figure 1) and other "mega-mosques," as I've taken to call the behemoth temples that have been cropping up in Bishkek



Figure 1.—The monumental Mahmud Kashgari Mosque, reportedly able to accommodate more than 3,000 worshipers, opened in Bishkek in the spring of 2017. (Author photo)

and other post-Soviet Muslim capitals—Kyrgyzstan, like Kazakhstan, Uzbekistan, Tajikistan, and Turkmenistan, gained its independence upon the dissolution of the USSR in late 1991, and most of its citizens claim at least nominal adherence to Islam.

With nearly one million residents—about one-sixth of Kyrgyzstan's total population—Bishkek is also home to non-Muslims. Verily, in early October I found myself exploring what is the city's unofficial Christian quarter, situated in its northwest quadrant. I located first the Orthodox Holy Resurrection Cathedral, then the newish, modest-looking Church of Jesus Christ, and then, even more modest, the Russian Evangelical Baptist Church, but I could not seem to find St. Michael the Archangel Catholic Church, rumored to be somewhere in the vicinity. So, I approached an old man, wobbling down the street, and asked him, in Russian, if he was aware of the Catholic church's whereabouts. Nikolai Ilyich, as I came to know the spry guy in his mid-80s (see Figure 2), scratched his chin, thinking, then gestured: "The Russians are that way, the Koreans are that way," he said, first cocking his hand southward and then angling southeast. Turning eastward, he continued, gesticulating: "The Baptists are that way, and there are some Kyrgyz further over yonder," and then rotating to face me, "But there are no Germans around here. And I would know—I'm a religious person!"



Figure 2.—The author (at left) and Nikolai Ilyich.

Nikolai Ilyich's response fascinated me on several levels. First, notice how he conflated ethno-nationality and religious affiliation—this is due to the manner in which group identities became configured in the late Russian Imperial and Soviet eras, a habit that remains common throughout the former Soviet space. Hence, by "Russians" he meant the Orthodox cathedral, which first opened its doors at the height of World War II (though anti-religious, atheistic, Stalin decreed the church's construction as a way to help win over faithful in the war effort). And by the "Koreans," he referred to the core group of Evangelical Christians who founded the Church of Christ in the 1990s. His mention of "Baptists" was a nod to ethnic Russians who had abandoned Orthodoxy—and were thereby perhaps slightly less Russian, in his eyes—and formed their own church in the late 1980s. By "some Kyrgyz further over yonder," he indicated the presence of newly constructed mosques just beyond the fuzzy boundaries of the Christian quarter. And "Germans," to Nikolai Ilyich and other elders in Bishkek, were representative of the Catholic parish, though, still, he wasn't sure of their church's location.

Underpinning Nikolai Ilyich's mental map is a set of historical-geographic processes that fundamentally shape the meaning of religion in Bishkek and the broader region. For most observers, the assumption is that Kyrgyzstan—along with the other post-Soviet 'Stans—belongs to the so-called "Islamic world." Indeed, nearly 90 percent of its populace self-identify as Muslim (see Figure 3). But Islam, though arriving in the region in the middle



Figure 3.—A young couple and their nikah (traditional Muslim wedding) at the Dzhuli Mosque, another of the newly constructed "mega-mosques" of Bishkek. (Author photo)

ages via the movement of peoples and ideas along the Silk Road, was not very deeply rooted in society until recent decades. Until the short Soviet century and its attendant modernization policies, the Kyrgyz were, for the most part, nomadic pastoralists who followed customary tribal law, the tenets of Islam subject to centuries-old shamanistic traditions. As such, popular assertions of a post-Soviet Islamic “revival,” a “resurrection,” or a “resurgence” taking place in Kyrgyzstan, implying as they do a return to some idealized premodern past, are woefully inaccurate and, furthermore, serve to inflame fears of religious fundamentalism, radicalization, and an innate aversion to living peaceably with non-Muslims.

Clearly, returning to Nikolai Ilyich, this is not the case. Striking is his public profession of faith, his declaration of belonging to Russian Orthodoxy. In stating to a stranger—and a foreigner at that—“I’m a religious person,” he positions himself not against Muslims or other sorts of Christians, but rather amongst a motley stead of faithful. This community includes Muslim (and non-Muslim) Kyrgyz. It includes ethnic Koreans, who endured forced migration by Soviet officials in the 1930s from the Russian Far East to the Central Asian steppe. It includes ethnic Germans, who in the late-eighteenth century were invited by Catherine the Great to farm Russia’s lower Volga area and then, amid the violence of World War II, were forcibly relocated by Stalin to Kazakh and Kyrgyz lands. And it includes multiple other ethnic and religious groups who claim Bishkek, Kyrgyzstan, as their home. As a multiethnic, interfaith community, their contemporary religious expression is conditioned not so much by some return to primordial, old-time religion, but rather by a shared Soviet and post-Soviet experience, the age-old search for transcendence (see Figure 4).

I eventually found the Catholic church and thereafter began regularly attending Sunday mass (see Figure 5). What initially struck me, in addition to the simple beauty of the modest temple, was the diversity of the parish. The church may have been founded by exiled Russian Germans in the late 1960s, but today few of them or their kin remain; in the wake of the Soviet Union’s collapse, most ethnic Germans in the area left Kyrgyzstan, accepting Germany’s offer for repatriation. Today, the parish is populated by Russians, Kyrgyz, Koreans, Indians, Africans, Filipinos, European and North American expatriates, and other cultural groups—truly a catholic gathering. Among their numbers is at least one California geographer. By the time you read this posting from the field, I will be baptized into the Church, becoming a Catholic like my Volga German ancestors.



Figure 4.—A man prays at Mahmud Kashgari. (Author photo)



Figure 5.—Sunday mass at St. Michael the Archangel Catholic Church. (Author photo)

An associate professor of geography at Humboldt State University, Matthew Derrick is co-editor of *The California Geographer* as well as vice president of the California Geographical Society. He spent the 2017–18 academic year as a Fulbright Scholar in Bishkek, Kyrgyzstan, where he conducted research on new religious landscapes and taught political geography at the American University of Central Asia.

BOOK REVIEW

***Trespassers?: Asian Americans
and the Battle for Suburbia***

Willow S. Lung-Amam. Oakland: University of California Press, 2017.
264 pp. \$29.95 paper. (ISBN 978-0-520-29390-8)

Reviewed by
Heather L. Benson
University of Nevada, Reno

Keywords: Asian Americans, ethnoburbs, Silicon Valley, spatial exclusion

THE UNITED STATES—land of immigrants, historically considered a multicultural melting pot—has recently become the setting of an outbreak of xenophobia. All manner of peoples standing outside of the mainstream encounter “exclusionary geographies” that can be mapped, interpreted, and critiqued, with sensitivity shown to both structuring forces from without and felt forces from within. These people may be excluded because of who they are, how they look, what they do and think, and are therefore deemed “out of place”—or even “trespassers”—in a range of mainstream spaces (Gregory, Johnston, Pratt, Watts, and Whatmore 2009).

Trespassers?: Asian Americans and the Battle for Suburbia is organized around landscapes that tell a story about Asian Americans’ struggles to make their homes in Silicon Valley. The author, Willow S. Lung-Amam, demonstrates that built landscapes and spatial uses that do not conform to White hegemonic views of suburbia often become points of negotiation for the terms of Asian American suburban inclusion. In this process, policy and planning prescription commonly reinforce dominant spatial norms and standards of suburban design and development. Spaces occupied primarily by Asian Americans frequently fall outside these norms, creating a sense that they are suburban trespassers. Governed by policies and processes that have long favored White Americans, suburbia’s built environment continues to racialize Asian American space and produce subtle trends of social and spatial marginality, even among those considered to be model minorities (Lung-Amam, 11–12).

Lung-Amam holds a Ph.D. in Landscape Architecture and Environmental Planning from University of California, Berkeley, with a background in

urban studies and planning, comparative studies in race and ethnicity, and community development. Her scholarship focuses on the link between social inequality and the built environment, and is primarily concerned with how the conditions in disadvantaged communities are shaped by urban politics, policy, planning and design practice, and the changing geographies of social and economic inequality. In conducting research for this book, Lung-Amam observed the everyday life in the spaces at the center of debates about Asian American exclusion—ethnic shopping malls, high-school classes, and the streets of neighborhoods most affected by large home development. She tracked Census figures, demographics, and spatial data; studied the archives of the city council, the school board, the planning department, and local libraries; and became an avid reader of local and regional news (15) to show that suburbia is an increasingly important place for immigrants and minorities to register their claims for equality and inclusion. *Trespassers?* also draws on the work of several notable geographers, such as Wei Li (“ethnoburbs”), Richard Schein (race and American urban landscapes), Donald Mitchell (cultural theory and landscapes of struggle and oppression), and David Ley (migration, multiculturalism, and the governance of diversity), and seminal works by Henri Lefebvre (“right to the city” and the production of social space), Michel Foucault (space, place, and geography in relation to historical and social thought), and David Harvey (social and environmental justice and geographies of difference).

Trespassers? starts with an introduction detailing the author’s main premise and the contents of the book, followed by five chapters, a hopeful afterword, and an appendix. Chapter one, “The New Gold Mountain,” focuses on the sweeping changes that occurred in Fremont economically, spatially, and socially after World War II, and underscores how this suburb’s rapid growth and development were prefaced on the valley’s booming innovation economy and Asian Americans’ own suburban dreams. Chapter two, “A Quality Education for Whom?,” considers how migrants’ educational priorities and practices have reshaped Silicon Valley neighborhoods and schools. A case study of the Mission San Jose neighborhood in Fremont showcases “White flight” driven by tensions between Asian American and White students and parents over educational values, school culture, and academic competition. Chapter three, “Mainstreaming the Asian Mall,” shows how public and political debates have framed Asian American-oriented shopping malls in the Silicon Valley as “problem spaces,” with planners and city officials using their power to promote particular visions of multiculturalism that are more aligned with their projected image of a middle-class suburb. Chapter four, titled “That ‘Monster House’ Is My Home,” examines controversies over

the building of large homes, or what some derisively call “McMansions” or “monster homes,” in established neighborhoods and demonstrates that the planning processes, development standards, and design guidelines adopted to deal with these conflicts largely reflect the interests of established White residents while marginalizing those expressed by Asian Americans. The final chapter, “Charting New Suburban Storylines,” examines the issues presented in the first four chapters and their effects on social and spatial change in Silicon Valley for suburban development, design, and community building, and provides a case study that challenges communities to examine the ways in which they are making space for minorities, immigrants, and other suburban newcomers (17–18). Lung-Amam urges readers, especially those who reside in suburban areas, to “shift their spatial norms from those that celebrate conformity, consensus, and stability to those that respect difference, contestation, and change” (18). If the U.S. is to continue to be a multicultural melting pot, these principles must be central to efforts to reconstruct and redesign suburbia.

Lung-Amam’s style is a mix of formal and informal qualitative research, intended for an academic audience yet suitable for those outside the academy as well. The language used and structure of the book are appropriate for and accessible by a broad audience drawn to the field of human geography, specifically those interested in race and ethnicity, urban studies, and Asian American experiences. *Trespassers?* is written in the first and third person; first person when sharing the specifics of how the author conducted the study, and third person when revealing the details of interviews and results of field research. The author’s thesis—that the structural forces at play in Silicon Valley suburbia, such as governmental, policy, and planning processes, have produced racialized landscapes for Asian American residents whose preferences do not conform to established suburban norms—is easy to follow; she maintains continuity throughout the entirety of the book; and the information presented is phenomenally well researched. Her results are illustrated in a narrative format that uses quotes from interviews and data gathered from secondary sources, participant observation, and a cultural landscape analysis; visual information is delivered in photographs and illustrations; and spatial information is displayed in maps. Lung-Amam delves deeply into the political, social, and cultural issues of the area regarding its pastoral history and suburbanization, push-and-pull factors for immigration and settlement (e.g., high-tech industry jobs), the importance of and competition for high-quality K-12 education, the development of ethnic shopping centers, and the construction of “monster homes” in Fremont.

This book is impressively comprehensive. Lung-Amam goes into great detail about immigrants from mainland China, as well as those from Taiwan and Hong Kong, and mentions of Southeast Asians. Only briefly, however, does she touch on experiences of Indian immigrants. The term “Indian American” is listed in the index as appearing only on pages 40–41, and, although reference is made to their presence once or twice in the book, “Sikh” and “Punjabi” do not appear in the index at all. I would have enjoyed more elaboration on Indian Americans, considering their large presence within the region, and they should not be forgotten when describing exclusionary geographies in Silicon Valley and the Asian American experience.

Lung-Amam’s interdisciplinary approach and research methods provide a unique perspective on Silicon Valley suburbia that wasn’t previously available in literature and adds to our understanding of Asian American experiences. This volume enhances scholarship on place-making, sense of place, (sub)urbanism and ethnoburbs, and landscapes of difference. Her research exposes the structural and social exclusionary forces at play in suburbia in relation to race, ethnicity, and immigration. This information may be utilized by planners and policymakers nationwide to promote the production of more ethnically and racially inclusive communities. Additionally, this study helps to uncover the role that spatial relationships and processes play in the construction and reproduction of exclusionary geographies in the western U.S. If you are an educator in a human geography-related discipline and you are searching for additional reading material for a particular course (e.g., urban studies, race and ethnicity studies, and Asian American studies), this book is right up your alley. I also recommend this book for students of human geography who are researching Asian American experiences.

Lung-Amam’s afterword includes a short reflection on race and social relations in Fremont and around the nation following the election of Donald J. Trump. These pages round out the book nicely—a book that highlights the spatial and social exclusion of Asian Americans and Asian immigrants in a region considered to be multicultural and multiethnic. Silicon Valley residents, along with many other U.S. citizens, “stood up to declare themselves welcome to immigrants and other marginalized groups” (186) in the wake of rising intolerance, xenophobia, and extreme nationalism. As Lung-Amam puts it, “breaking down the barriers that keep residents of different backgrounds out of privileged spaces, be they neighborhoods or countries, and establishing the social and spatial infrastructure that allows diverse values, practices, and aspirations to thrive takes the sustained efforts of those beyond the halls of Congress and the White House... The ways that communities

make space for difference is a test of strength and resilience of the nation’s democratic ideals and of the American dream” (186).

Reference

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Heather L. Benson is a Ph.D. student in the Department of Geography at University of Nevada, Reno. E-mail: hream@nevada.unr.edu. Her research interests include transnationalism and diaspora studies, ethnic geography, and spaces of identity for ethno-religious minority groups in the American West.

BOOK REVIEW

***California's Best Emerging Poets:
An Anthology***

Compiled and edited by Z Publishing House. Z Publishing, 2017.
260 pp. \$14.99 paper. (ISBN 978-1-9742-7337-9)

Reviewed by
Janelle Adsit
Humboldt State University

IF ONE CAN THINK OF GEOGRAPHY as an “autopsy of the invisible”—to borrow the words of Joshua G. De Leon which serve as an epigraph to this collection—then poetry is geography’s great companion.

Z Publishing has been for the past several months releasing installments of geographically based poetry in a “best emerging poets series,” with each book arriving from one of the nation’s fifty states. The California edition is thematically organized with between ten and forty-five poems included in each of the book’s eight sections. The book opens with its longest section, titled “thoughts, reflections, and stream of consciousness.” This is followed by sections on life and memory; family and friends; love, romance, and heart-break; beauty; nature, wildlife, and the outdoors; and inspiration. The book concludes with a section titled “miscellaneous.” This is perhaps an example of clunky curating, but it reflects Z Publishing’s orientation—expeditious publishing to get words into the hands of readers.

Z Publishing presents itself as out to change the model of literary publishing. The press’s mission is to link emerging writers with enthusiastic readers, to raise the visibility of writers and help readers navigate an oversaturated publishing industry. The press started as a Facebook group and blog designed to bring independent writers together, and it has grown into a publisher of books across genres. The press has a new headquarters slated to open in southeastern Wisconsin.

Given Z Publishing’s mission, the anthology is an important genre and tool for the company. Their first release, titled *Z Poetry: An Anthology of International Indie Poetry*, signaled the beginning of several series of compendiums like it, with the U.S. state-based emerging poets series (of which this California edition is part) among them. The press states its interest in the

anthology as a mode of publishing: “By producing anthologies of multiple authors rather than single-author volumes, Z Publishing hopes to harbor a community of readers and writers, bringing all sides of the industry together.” *California’s Best Emerging Poets* does this work of bringing things together. In this collection, the reader can find poems on nectarines and landfills and “neon billboards selling sex and apple juice,” as a line in Mac Taylor’s “When the Night Comes” observes. There are poems that offer a snapshot in time: Katherine Farrell’s “2017” is a moment: “a mother and daughter on this bus/ smiling at each other like they have a secret/ the sweetest thing I’ve seen all year.”

Some poems are place-based, rendering the particularities of a location in a moment of observation. Mia MacNeill’s “Iceland” describes: “As far as the eye can see / There is a carpet of soft springy yellow green moss/ It covers the lava pillows that caused devastation so long ago.” Greg Yerumyan’s clever poem “Untitled” takes on the form of the parking lot, using the techniques of concrete poetry to visually and sonically render the repetition and sense of displacement one feels when navigating a full lot of cars.

As another example of place-based writing, Oscar Del Toro’s “Air Quality (or: Air Quality: Unhealthy for Sensitive Groups)” offers an environmental justice-minded portrait of Fresno: “I’ll die on a bad air day in Fresno” is the line that opens this poem. And it moves into speculative realism: envisioning the men who will prod the poet some day, “wearing breath masks as they/ plan for a robotic workforce.” The future of this poem is also very present, as the lines in a later stanza tell us:

The toxic countryside will weep of
genocide through pesticide.
Its poisoned rivers will spread disease
to remind us that no one survives
agriculture in the central valley.

The poems in *California’s Best Emerging Poets* move between future and past. “I scratch my spine/ where time has taken root,” Kym Cunningham writes in “Vegetable Temporal.” The poem exposes the plantlike nature of the human body, as the plant also has the status of personhood—all conditioned by history.

There are poems that speak back to the myths that have dominated. “Rewritten Origin,” a poem by Marissa Ahmadkhani, provides the counternarrative:

I like to think that Medusa asked for snakes.
That,
sick of foreign fingers
running
through her hair, she approached Athena—

Ahmadkhani’s poem signals an ethos that characterizes significant portions of the book: an orientation that allows the writer to turn the myth on its head.

The writers in this collection look to sky and ground to orient themselves. This is not a book of ecopoetry, but one can find an ecopoetics in its pages. “I want to be a colorographer,” Matthew Pringle writes, “mapping the colors of the earth”—the thousands of variations on blue and green in sky and earth.

As this collection is a specifically *emerging poets* series, the pieces included are of varied quality. Some fall to cliché or hackneyed craft choices. Some over-rely on abstraction. There are opportunities for greater complexity and defamiliarization. But there are gems to be found in this collection. Some of these gems find a way to critique and question their words—enabling self-reflexivity that is not overly self-conscious. Coccinelle’s “Dear Diary” is a poem in two voices that teases itself and draws out the implications of its words. When one voice says, “She lived in a world where being happy was not easy,” the other voice responds, “(dramatic much?).”

Voices abound in this anthology. The book offers us an artifact of a time and place—a group of poets brought together because of where they reside. If California is a story, as Native American writer and poet Deborah Miranda famously said it is, then this book offers a piece of that story.

Janelle Adsit is an assistant professor of Writing Practices and an affiliated faculty in Environmental Studies at Humboldt State University. She is the author of the poetry collection Unremitting Entrance and a chapbook, Press Yourself Against a Mirror. Her research focuses on creative writing pedagogy and labor issues in higher education. Her work has recently appeared in Feminist Formations and New Writing, and her book Toward an Inclusive Creative Writing, released in 2017, is the first of a series of texts forthcoming from Bloomsbury Academic.

BOOK REVIEW

***Gendering Radicalism:
Women and Communism
in Twentieth-Century California***

Beth Slutsky. Lincoln: University of Nebraska Press, 2015.
286 pp. \$45 hardcover (ISBN 978-0-8032-5475-6)

Reviewed by
Jessie Clark
University of Nevada, Reno

IN *GENDERING RADICALISM*, Beth Slutsky produces an important portrait of radical political organizing in twentieth-century America through the stories of three women who served in successive leadership positions for the Communist party in California from 1919 through 1992: Charlotte Anita Whitney, Dorothy Ray Healey, and Kendra Claire Harris Alexander. Working and organizing within different but overlapping epochs of radical reform movements in America—the Bolshevik Revolution (Witney), the U.S. labor movement (Healey), and the Cold War and Civil Rights Movement (Alexander)—their stories reflect the morphology of the Communist Party as it wrestled with defining debates over race, gender, and class in America. To that end, this book also reflects the unique contributions of each of these women to the Party, and the inevitable tensions around the position of women in the Party. Finally, this book explores the role of California in centering and shaping the character of politics in America. For its tolerance toward more radical political philosophies, California then and now stirred the winds to pull American politics leftward. In this regard, this story of three women in California is not one that unfolds in isolation to other lives involved in and touched by the Communist Party across America. Whitney, Healey, and Alexander's political visions, while mediated in the American West, were ultimately informed by and expressed a shared *American* experience of economic disenfranchisement, racism, and sexism.

The book is comprised of five chapters. In Chapter 1, Slutsky introduces the book's guiding questions, including "How did the Party change over time because of and for its female members?" "To what extent did its members' race and class shape the Party's changing agenda?" and "How and why was California central in their experiences with radicalism?" (3). These questions

reflect perhaps the book's most compelling contributions: its exploration of how the female experience, intersecting with race and class, stretched the Party's vision and efficacy over time. Following Chapter 1 are three chapters, each devoted to the professional and personal biographies of Whitney, Healey, and Alexander, and a concluding chapter that provides a comparative discussion of the shared ideals, beliefs, contradictions, and experiences of their collective political careers.

While historical context, economic and racial background, and entrance and exit points of Party membership among the three women described in *Gendering Radicalism* varied, there were some common motivations for joining the Communist cause. None of the women began from a philosophical place; rather, they found the Party through grassroots activism (192) that was situated in personal encounters with structural racial and economic inequalities growing up.

Charlotte Anita Whitney's legacy was defined by a sometimes harmonious, at other times fraught position at the intersection of class privilege and class consciousness. As a woman of wealth and connection, Whitney had an influence on the Communist Party in the 1920s that drew, in part, on the political mobility afforded her by class privilege and family status. An early suffragist, her political life steered increasingly toward more radical philosophies that called for deep overhauls of the American political system. She managed to maintain friendships among established liberal elites, finding common ground on social issues and drawing on these connections when encountering the justice system. Whitney's landmark political moment came in 1920 when she was accused of supporting the violent overthrow of the U.S. government for her membership in the Communist Labor Party in California, charges that were ultimately dropped, years later. Her experiences in and out of the court system provided a storyline for the Communist Party, and she was branded the "Western matriarch" of radicalism in the U.S. (23), a title that at the time was best served by a woman with political clout and economic means. Indeed, Whitney's story demonstrates that women's entrance into the folds of Party leadership early on was determined largely by class.

Dorothy Ray Healey's involvement in the Communist Party centered more directly on the voices of the working class. Healey worked within the most successful, and perhaps most visible, era of communist organizing, one that was fueled by collective economic anxieties around the Great Depression. Healey was most active in mid-century labor movements, particularly among

workers in the agricultural and production industries in California. Her relationship with food industry workers, particularly female, was long. She oversaw one of the largest female unions in the country and tackled issues of gender and race in much deeper ways than the previous generation of female activists. Still, Slutsky notes, in line with many "protofeminist Communists" of the time, she expressed hesitation and even disdain at any kind of special "privileging" of her gender (89). Her relationship with the Communist Party in America shifted in 1956 at the revelation of the atrocities committed under Stalin's leadership. While membership in the Party across the U.S., and notably in California, declined with evidence of widespread and systematic abuses of Soviet power, Healey held on to aspirations of Party reform much longer, until ultimately defecting to the New American Movement in 1975.

Kendra Harris Alexander, active from 1966 until 1992, represents most directly the influence of a second wave of feminism that recognized the different raced and classed experiences of women. She was active in the civil rights movement early on, coordinating Selma's sister protest and follow-up protest in Los Angeles in 1965. She spent summers in the South working on civil rights, observing a kind of structural poverty and racism that did not exist in California. These experiences "taught her about the Intractability of poverty and the value of a broader class-based approach to confront racial inequalities" (142), lessons that laid the foundations for her entrance into the Communist Party. It was a time when civil rights activists were torn over what lay at the heart of racial inequality: race or class. Alexander found her answers in the Old Left and the theoretical work of Marx and Lenin, and funneled her frustrations into work on racial inequality in California, including housing access and affordability. Alexander served a long career and helped establish a face and voice for racial issues in the Party. She and the Party ultimately divorced in 1992 over tensions around the relevance of the Party in the post-Cold War era, and she tragically died in a fire in 1993. In spite of this sticky end and the legacies of Soviet oppression abroad that continued to plague the reputation of the Party, Alexander's storied career pushed American Communism to work more deeply at the intersection of race, class, and gender.

A common adage of feminist scholarship is that the "personal is political." *Gendering Radicalism* focuses on the personal histories of these women as they find and modify their public political voice, with an understanding that "public" and "private" are not distinct and disconnected spheres of social life; they inform one another and are also fraught with their own internal contradictions. In Slutsky's narrative, we see the private human dimensions

of these very public figures. For example, Whitney's emotional observations of poverty in Lower East side Manhattan, Healey's mother's difficulties accessing adequate reproductive healthcare, Alexander's formative visits to the American South, and the unique marriages and parental roles of each woman that tested their public ideologies on gender roles and relations. These intimate details, including the wonderful collection of personal photos at the center of the book, describe the human experiences and relationships that formed the backbone of each woman's political aspirations. To that end, *Gendering Radicalism* is an important contribution to feminist studies. Slutsky describes how female activist communities were fostered through communal care, through health and family and financial need (192). Slutsky writes, "their families, friends, and cultural understandings centered on American notions of identity and femininity. They lived their lives deeply connected to their local communities—from community centers to women's clubs to student organizations to local politics" (7). These are women and stories that emphasize the communities of care—familial, friendly, professional, and personal—that underpin the feminist project for social change.

I highly recommend this book for anyone with a historical curiosity about radical politics in America, but especially for activists and observers of radical political culture today. Embedded in these stories are important reminders and lessons about the risks, challenges, and rewards of operating on the margins of established political and social norms. This is also an important feminist narrative of the life of the Communist Party in twentieth-century America that explores the intersectional dimensions (racial and economic) of gender in politics. Slutsky's book comes at an important time, as the structural legacies of Whitney, Healey, Alexander, and many other women's efforts to advance social equality over the past century are under assault. *Gendering Radicalism* is a testament to the courage, resilience, and unique contributions of female activists and the ever-more important work of women to push the boundaries of democracy.

Dr. Jessie Clark is an assistant professor in geography at the University of Nevada, Reno. She conducts research at the intersection of feminist and political geography in Kurdish Turkey and teaches in areas of political, cultural, and Middle East geography. She is published in several journals, including Annals of the American Association of Geographers, Geopolitics, and Gender, Place and Culture.

Geographic Chronicles

2017 CGS Annual Conference Award Winners

JOE BEATON POSTER AWARDS

Undergraduate:

FIRST PLACE:

Krista Vilimas, Amanda Yepiz, Klaycie Tanedo, CSU Fullerton, "Campus Tree Assessment at CSU Fullerton"

SECOND PLACE:

Kolbe Stets, Grossmont College, "New Bike Lanes for San Diego"

THIRD PLACE:

Rodolfo Cabrera, CSU San Bernardino, "All Along the Watchtower: Fire Weather and Smoke Observations spanning the U.S.-Mexico Border from 1984–2005 at the Los Pinos Mt. Lookout California"

Graduate:

FIRST PLACE:

Guadalupe Maldonado, CSU Fullerton, "A.T. Domingensis Bio-invasion in Lake Patzcuaro: Purepecha Craft Use of Exotic Reed in Mexico"

SECOND PLACE:

Carlos Reyes-Andrade, CSU Northridge, "Examining the Access to Farmer's Markets in Los Angeles County"

DIGITAL CARTOGRAPHY AWARDS

FIRST PLACE:

Greg Beringer, CSU Fullerton, "Bicycle and Pedestrian Collisions Near Anaheim Schools 2005–2015"

PAPER OR ANALOG CARTOGRAPHY AWARDS

FIRST PLACE:

Torrie Brickley, Humboldt State University, "Colombian Refugees Seeking Asylum"

SECOND PLACE:

Omar Peña, CSU Northridge, "The United States Under the Articles of Confederation 1878"

THIRD PLACE:

Victoria Martinez, CSU Stanislaus, "Wi-fi Signal Mapping"

TOM MCKNIGHT PAPER AWARDS

Undergraduate:

FIRST PLACE:

Nathaniel Douglas, Humboldt State University, "Mapping Arcata"

SECOND PLACE:

Andrew Fowler, Sonoma State University, "Sustainability Best Practices in Sonoma County's Dry Creek Valley Wine Industry"

THIRD PLACE:

Andrew Banh, Orange Coast College, "Affordable Housing and Housing Affordability in Northern Orange County, California"

Graduate:

FIRST PLACE:

Eddie Bairam, CSU Long Beach, "The Origins and Spatial Diffusion of Female Professional Soccer Players in the United States 1991–2015: Geographical, Cultural and Social Perspectives"

SECOND PLACE:

Juan Carlos Garcia, CSU Fullerton, "The Curious Case of Park Space: An Analysis of Public Parks in Santa Ana, CA"

THIRD PLACE:

Pedro Chacon, CSU Fullerton, "A Spatial Analysis of Open Illegal Drug Markets"

GEOSYSTEMS AWARDS

Undergraduate:

Russ Walls, Humboldt State University, "Benthic Debris of Whiskeytown Lake: The Pollution of Public Access"

Graduate:

Amanda Fencl, UC Davis, "Drought Resilience Strategies of California's Small Drinking Water Utilities"

DAVID LANTIS SCHOLARSHIPS

Undergraduate:

Nathaniel Douglass, Humboldt State University

Graduate:

Guadalupe Maldonado, CSU Fullerton
Maelynn Dickson, CSU Fullerton

STUDENT TRAVEL AWARD WINNERS

Solveig Mitchell, Humboldt State University

Nathaniel Douglass, Humboldt State University

Kelly Bessem, Humboldt State University

Isabella Knori, Humboldt State University

Amanda Fencl, UC Davis

Mario Ojeda, CSU Stanislaus

Pablo Estrada, CSU Stanislaus

Carmen Gonzalez, CSU Stanislaus

Jessica Carey, CSU Stanislaus

Troy Westover, CSU Stanislaus

Nicolene Shalita, CSU Stanislaus

Guadalupe Maldonado, CSU Fullerton

Greg Beringer, CSU Fullerton

Maelynn Dickson, CSU Fullerton

Krista Vilimas, CSU Fullerton

Klaycie Tanedo, CSU Fullerton

Dominique Edmond, CSU Fullerton

Amanda Yepiz, CSU Fullerton

Elkana Olorukoti, CSU Fullerton

Carl Adler from Irvine Valley College