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Securitizing Suburbia: The Financialization of Single-Family Rental Housing and the Need to Redefine Risk

Since the foreclosure crisis, a handful of private-equity backed real estate companies have purchased over 200,000 single-family rental homes throughout the nation. Originally, these companies planned to hold the properties until the real estate market improved and then sell the homes to individual buyers. However, they soon realized that they could generate higher returns for investors by operating the units as rentals, issuing debt securities backed by the rental incomes, and selling equity securities (stocks) in the global exchanges. As a result, the previously “mom and pop” industry of single-family rental housing is now, for the first time, financialized within the global markets and institutionalized by an emerging oligopoly of large-scale rental companies.

This research examines the rise of single-family rental housing as an asset class, with a particular focus on the construction, mitigation, and management of “risk.”

By analyzing interviews with industry actors, investor disclosure documents, quarterly earnings calls, and market reports, I show how the financial industry constructed a dominant discourse of financial risk focused on maximizing rental yields and home price appreciation, minimizing maintenance costs, and reducing political opposition. I argue that the ability of the financial industry to “self-regulate” access to capital through internally negotiated legal structures, disclosure requirements, and agreed upon norms of “trust,” shifts the burden of risk from investors onto tenants, prospective homebuyers, and local communities.

I use quantitative, qualitative, and geospatial analyses to propose alternative risk assessment tools and strategies that redefine whose risks should be mitigated and who should do the mitigating. Using Los Angeles County as a case study, I find that middle-income neighborhoods with higher percentages of African-American residents and lower home values are disproportionately impacted by the increasing institutionalization and financialization of single-family rental housing. Additionally, tenants renting from the largest single-family rental companies face aggressive rent increases and greater maintenance responsibilities. Reframing “risk” not only better protects tenants and prospective homebuyers, it also interrogates the intersection of financial regulation and community development, recognizes the contradictions of planning communities without attempting to plan economies, and helps advance a more proactive vision of economic justice and economic democracy.
What Happens When Resettlements Focus on the Physical Environment: The Aftermath of Resettlement Process in Displaced Communities in Cartagena, Colombia

Over three million people were affected in Colombia from the rainy season associated with the “La Niña” phenomenon between April 2010 and June 2011 (Alta Consejería para las Regiones y la Participación Ciudadana 2012). Likewise, Colombia has the second most internally displaced persons in the world: 6.3 million (trailing Syria with 7.6 millions victims, and followed by Iraq with 3.3 million.) (IDMC 2015b). Given the magnitude of displacement in the country, this problem contributes the largest number of human rights violations in the country (HRW 2005). This research studies the dilemmas that accompany resettlement processes, the involuntary physical and social isolation of residents from access to services and public facilities, the consequences of this for economic well-being and quality of life, and the improvement of the personal security from crime and violence.

To test my hypothesis, this research will answer the following question: Why do resettlement processes create deteriorated socioeconomic livelihoods and fragmented communities? This thesis finds that while resettlement processes provide new built environments to address the physical needs of the displaced population, they do not address the needs that perpetuate poverty, vulnerability, and marginalization. This research explores the challenges and dilemmas that displaced communities face in order to inform discussions related to the physical, economic, and social reconstruction of communities in the aftermath of displacement. It also analyses the parallels and contrasts between 28 displaced families that went through the government program of a resettlement process and 10 families that decided to reconstruct their lives outside that program. The goal is to re-examine the policy, the specific approach of the state, the gains and losses of this resettlement process, and to highlight the relationship between Colombia’s armed conflict and resettlement processes. Thus, this thesis will identify potential recommendations for other displaced communities and for policymakers and NGOs examining how housing is necessary, but not sufficient to resettle sustainable and resilient communities.
Terra ex Machina: Land Building and the Breach of Property Regimes

Land building is the infilling of littoral or wetlands systems with developed dry land. It has long been used by state actors to overcome territorial constraints and conquer “wastelands” for economic development, but is increasingly used for large-scale, privately-financed real estate development. For these projects, land building is especially advantageous to both state and development interests because it can bypass traditional land acquisition and because it is unencumbered by prior legal claims, uses, or ecological functions. Compared to inland property, the relative mobility of built land makes it better suited to market-led development. This thesis frames land building as a “geo-hack”: it exploits a false premise of planning and property regimes — that land is fixed in place and quantity — and thereby circumvents both.

This work situates offshore land building on the Malay Peninsula within its history of land alienation, the practice of expanding commercial landholdings by extinguishing customary land uses and ecological functions. Focusing on the peninsular state of Johor, I analyze tensions between the agrarian property regime created by land alienation and recent real estate development pressures. I then turn to the case of Forest City, a large-scale real estate development being built in the straits between Johor and Singapore. By exploiting Malaysian land alienation procedures, the developer fully captures an unexploited rent gap and the state government avoids directly contending with social costs that usually accompany large-scale real estate development. However, my thesis shows that these gains are realized only by overwriting existing production regimes and exposing all actors to global market risks.
Difficult History: Saving Yangon from Colonial Nostalgia

Using the form of an essay I discuss the preservation of built heritage from the ‘difficult’ histories of colonialism and enslavement, linking together the global stories of oppression through colonialism and slavery to the global tourism and pressure for economic growth today. I focus on Yangon, Myanmar (Rangoon, Burma), which has the world’s largest collection of Victorian and Edwardian colonial architecture. Years of active neglect by the military government have preserved these aging structures, but are now coming to an end amid pressure to modernize and campaigns to actively restore the historic downtown. In this thesis I explore the politics of preservation and the market forces of international tourism that have led to nostalgic restorations of colonial relations for elite travelers.
Developing Common Wealth: Workspaces for Innovation and Entrepreneurship in Massachusetts

Over the last two decades, Boston and Cambridge have generated some of the strongest and most celebrated innovation districts — Kendall Square and the Seaport District — in which new models of commercial and civic real estate support dense webs of relationships among high-growth companies, academia, investors, mentors, and corporate R&D. Although beneficial for the overall competitiveness of the region, the wealth generated by these start-up and tech communities is not broadly shared, and the Commonwealth of Massachusetts’s economic development policy — Opportunities for All — has focused on reducing disparities across the state. Meanwhile, the state’s Gateway Cities present persistent challenges with lower than average incomes and weak market conditions for real estate development.

Since 2014, MassDevelopment’s Transformative Development Initiative (TDI) focused the state’s investment in Gateway Cities on projects to generate follow-on private investment, TDI Cowork grants for “collaborative workspaces,” broadly defined. In an effort to support communities of entrepreneurs across the state, TDI Cowork expanded into a state-wide Collaborative Workspaces Program in 2016.

Despite this interest in using community-oriented workspaces to catalyze new economic opportunities, policymakers, developers, and other economic development professionals in Massachusetts lack a comprehensive picture of what spaces are currently available that aim to support innovation and entrepreneurship. A new inventory of workspaces utilized three categories from a previous list of innovation assets and found 50 “coworking spaces,” 51 “innovation centers,” and 20 “maker spaces.” Of the 121 spaces, approximately 70 opened in the last three years and several others are expected to open in 2017. Survey data showed that spaces in Boston, Cambridge, and Somerville differ from those in the rest of the state in several ways that are significant for stakeholders aiming to catalyze economic development, including a higher portion serving startup teams, providing access to corporate partners and investors, and supporting members/users of digital products versus creative or professional services. Further analysis of the innovation ecosystem in Worcester suggested opportunities to attract mid-stage start-ups and mid-career entrepreneurs rather than focus on undergraduate student retention as an economic development strategy.
Food Grows Where Water Flows: Securing Water For Agricultural Production in a Drought-Stricken California

The state of California carries a large percentage of the national food security as it is responsible for a considerable amount of the agricultural production consumed in the United States. As climate change causes further challenges for agriculture, it seems wise to work on developing resilience strategies for this industry. Most research on these topics has been focused on generating high-tech systems that require considerable amounts of energy and financial resources. However, the reality is that countries facing the biggest hurdles when it comes to these matters do not have the necessary means to create sophisticated projects at large scales. The best option right now is to learn how to use drought management strategies and spatial patterns to allow for better use of water resources.

This thesis explores how the spatial distribution and interaction of hydrological resources, geological features, climate patterns, topography, and water infrastructure impact agricultural production in the Central Valley in California. Rather than developing one final solution, this thesis presents options for further exploration based on the specific conditions of California. This will allow readers to better understand how to improve water use and access for agriculture in a scenario of drought. The intention is for this approach to be replicable and adaptable so it can improve agricultural production and food security in other regions or countries facing similar conditions due to climate change.
Until recently, prisons were considered an economic development strategy particularly in rural communities struggling with the loss of manufacturing jobs. However, many studies have shown that prisons often have weak linkages to the host community, and sometimes have negligible or even negative impacts on rural economies. A combination of factors including changing sentencing laws, inadequate conditions in facilities, fiscal conservatism, and increasing reliance on community-based alternatives to incarceration are now leading to prison closures all around the country. In this changing context, this thesis explores (i) What are the real and perceived impacts of prison closures on local economies in small rural counties?; and (ii) Where communities are redeveloping old prisons to boost their economies, how are local needs, politics, and project constraints (related to design and finance) shaping the transformation of these sites?

It focuses on two case studies, in Fulton County, NY and Scotland County, NC, to describe how rural communities might disentangle the complex relationship between economic development and mass incarceration, and transition to new ways of employing people and generating wealth after a local prison closes.
Sonja Boet-Whitaker  
Thesis Advisor: Lawrence Susskind

**Buyouts as Resiliency Planning in Post-Sandy New York City**

Land buyout programs are an element of storm recovery in the greater New York City area after Hurricane Sandy made landfall in October 2012. In response to resident advocacy, the New York State Governor’s Office of Storm Recovery initiated a neighborhood-based buyout on the East Shore of Staten Island through the New York Rising storm recovery program. New York City declined to participate, but offered to acquire storm-damaged homes in other areas where the New York State buyout was not offered. The intention was to resell these properties to new private owners at auction, to be redeveloped to flood-resistant building standards. By contrast, the New York State program, which has purchased 37 acres of land within the 100-year floodplain, was legally bound to hold the acquired properties as open space in perpetuity, promising former residents that their land would become a buffer for inland areas, creating more resilient land use along the vulnerable coastline.

This thesis analyzes the success of the state program in enhancing resiliency by assessing participation and attrition rates within designated buyout areas, as well as reasons for attrition. The lack of coordinated goals and agreed-upon tools prevented New York Rising from successfully creating a coastal buffer area to protect residents from sea level rise and future flooding.
Decoding Sponge City in Shenzhen: Resilience Program or Growth Policy?

Unprecedented urbanization in China, combined with the increase of extreme weather events globally, has made Chinese cities more vulnerable to natural hazards such as urban flooding. In response to this problem, along with non-point source pollutions and shortage of fresh water resources, a national program named “Sponge City” was first introduced in early 2014 to form a comprehensive solution in alternative urban water management.

This thesis examines the definition of “Sponge City” by exploring its two major streams of conceptualization. On one hand, “Sponge City” is primarily designed to be a distributed resilience program modeled after Low Impact Development (LID) and Green Infrastructure (GI). On the other hand, “Sponge City” serves as the justification of new investment in the urban construction sector and the experiment field of financial innovation such as Public-Private Partnership (PPP).

However, a widely observed contradiction of the duality embedded in the program design of “Sponge City” is that retrofitting dense urban areas with alternative water management infrastructures requires gradual investment over a long period before maturity. This induces higher costs in operation and maintenance, as well as generates little economic return in most cases, making these projects largely unattractive to private investors and hard to meet their environmental and financial objectives simultaneously.

In the face of such dilemmas, local governments have tended to skew “Sponge City” towards a pro-growth policy by branding “Sponge New District” in urban outskirts for more spatial flexibility and political leeway, as is shown in the case of Guangming, Shenzhen, in the Guangdong Province. Developing such “Sponge New Districts” provides local government with more development opportunities for private investors to contribute in various basic urban infrastructure projects such as roads and amenities, as well as the justification of aligning Sponge City development with the local developmental agenda and the direct intervene of government in financing and construction. These “Sponge New Districts” divert the original environmental ideology of Sponge City and suggest that a fundamental gap exists between an idealized resilience program and the execution of pro-growth agendas at local government level in contemporary China.
No Matter What, I Got Everybody’s Back: Planning for the Beloved Community in Bellevue, PA

The vision of Beloved Community, in which wealth is distributed equally, social hierarchies are disassembled, and people across all differences can live together like family has fueled and guided many civil rights social movements. This thesis posits that the planning profession should consider using this vision as a serious guiding concept for designing community development strategies that create more opportunities for active love and relationship across deep social divides.

This research asks whether planning that explicitly focuses on strengthening relationship across difference (such as race and class) can generate community strategies different than those currently recommended in the planning literature. Specifically, I explore this question in Bellevue, Pennsylvania, an inner ring suburb of Pittsburgh. To explore ways in which a focus on relationship could assist planning in Bellevue and similar places, the research examines data from 26 interviews with local residents, as well as the literature on policy recommendations for inner ring suburbs.

The data indicate that, in contrast to existing policy recommendations, planning that attends to relationship across difference has the potential to reframe success to resist negative stereotypes of Bellevue, directly address social hierarchies, guide interactions across race and class, and provide opportunities for youth to contribute to local planning efforts. The research then tests whether a focus on relationship have tangible effects on how Bellevue residents plan by examining data from two focus groups with high school students in which they planned for actively bridging local social divides. These Beloved Community conversations reframed students’ views of the community’s assets and challenges, illuminated students’ visions that planners become more vulnerable to deep relationship in their community engagement practices, unearthed more radical ideas for local planning intervention (for example, rejecting the exclusivity of local school district boundaries, redesigning policing institutions to be care-focused, or building upon local resistance to materialism and class consciousness), and changed the notion of who can be planner by illuminating skills that are often undervalued in education and career pathways. This research suggests that planning with a direct focus on strengthening relationship across difference can generate strategies that may be more comprehensive and effective in ultimately building toward communities in which all are loved.
New Development: Friend or Foe to Chinatown Small Businesses?

Chinatowns in cities like Boston, New York, and Philadelphia have well established reputations as vibrant ethnic neighborhoods that draw tourists as well as working-Chinese immigrants. The individual businesses that line the streets of Chinatown are crucial to creating these unique urban neighborhoods. As cities are undergoing a new era of growth, and real estate activity in urban centers is booming, the impacts on small businesses has not yet been widely researched. This thesis uses Chinatowns (in Boston, New York, and Philadelphia) as case studies to uncover the impacts of new real estate developments on small businesses. The research relies on a mixed-method approach, utilizing quantitative data from city reports or census data, as well as qualitative data derived from interviews with local stakeholders, particularly small business owners.

The broad categories of the impact documented include: (1) changes to inventory and availability of ground floor retail space, (2) a homogenization of storefront design, (3) changes to the residential community, and (4) rise in occupancy costs. In contrast, the top concerns identified by business owners were (1) the image of Chinatown as dirty and (2) the availability of parking. The mismatch between the impacts of development and the concerns of business owners deserves more research but was not fully addressed in this thesis. The conclusion of this thesis provides readers with a preliminary framework for assessing displacement risks that can be applied to other ethnic districts and suggests possible interventions that can mitigate some of these risks.
Samantha Cohen  
Thesis Advisors: Mary Anne Ocampo and Rafi Segal  

Ecovillages as Models for Sustainable Urban Neighborhoods: Design Guidelines and Methods for Understanding, Analyzing, and Designing Sustainable Communities  

Ecovillages, which are grassroots intentional communities focused on the shared values of environmental sustainability and community-building, offer an alternative to traditional development primarily focused on developer profit, which creates incentives to build cheaply with little consideration for sustainability, reducing operating costs, creation of community or innovation in building techniques. The problem with modern development practices is that there is an absence of truly sustainable, community-oriented housing options on the market that are economically empowering, socially just, and which enhance the ecology of place by building all forms of capital — economic capital, social capital, and environmental capital.

Ecovillages provide a solution to this, as well as many other ‘wicked’ problems our society faces — they are blueprints for how communities can live sustainability.

This thesis explores the best practices in ecovillage urban design in urbanized and rural settings to improve the design of current and future ecovillages and to use as a design model communities or designers in building sustainable communities, as urban design is inherently linked to sustainability. Through the creation of a matrix of sustainable urban design strategies, this can be used to compare various ecovillages and sustainable communities to understand and analyze how values are embodied in the physical site design or constrained by urban site conditions, and give a process and design guidelines to designers and communities looking to create sustainable neighborhoods or ecovillages.
Fireline, Divided: Labor Representation of Unionized and Incarcerated Firefighters in California’s Wildlands

In California, up to 40% of the state’s firefighters are incarcerated people working in a prison labor program called the Conservation Camp Program, more commonly known as “fire camps.” Fire camps are 43 small, rural prisons throughout the state that house up to 4,500 incarcerated people and are largely co-managed by the California Department of Corrections and Rehabilitation; and Cal Fire, California’s Department of Forestry and Fire Protection. Each year, California’s incarcerated firefighters provide approximately three million person-hours responding to fires and other emergencies and are paid between $2 a day in the program to $2 an hour when on the fireline.

Historically the labor movement has opposed the use of prison labor, which was seen as a source of wage competition, job replacement, and strikebreaking “scabs,” but since the fire camps’ creation during World War II, California’s professional firefighters have acquiesced to this pervasive use of prison labor in their otherwise unionized field.

As a result, California’s firefighting labor force is divided between free and incarcerated, represented and not represented. Through interviews with unionized and formerly incarcerated firefighters, this thesis interrogates the labor market dynamics that contribute to organized labor’s acquiescence to this prison labor program and articulates the implications of this divided workforce on incarcerated workers who perform this dangerous work for the state in a carceral context. As a workforce, California’s incarcerated firefighters face heightened risks and fewer benefits than unionized firefighters, while dramatically reducing the cost of fire protection for the state. The implications of this research also extend to the possible impacts of reliance on this captive workforce on the state’s fire management and criminal justice policy.

Existing scholarship on prison labor endeavors to understand the role of prison labor as rehabilitation or punishment and its role in the larger system of incarceration. This research seeks to position prison labor as labor, underscoring its impact on the labor market on the “outside” and the critical need for prisoner workers’ representation and workers’ rights, especially in the context of dangerous work.
We Shall Not Be Moved: Advocacy and Policy in a Rapidly Changing Boston

The ability to access affordable, stable, and good quality housing has become an increasing concern for policymakers, community advocates, and activists in growing urban metros across the United States. In Boston, population growth and rising housing costs have spurred new development of luxury housing and renovation of existing residential buildings, putting pressure on existing neighborhood tenants and homeowners. As a response to these phenomena perceived as contributing to a displacement and eviction crisis in Boston, organizations within the Right to the City Alliance proposed legislation that they felt would “slow down” the processes leading to eviction of tenants in larger buildings and former homeowners in their foreclosed policies. The Jim Brooks Community Stabilization Act, formerly the Just Cause Eviction Ordinance, if implemented, would ensure residents are notified of their rights in eviction proceedings and allow them to be evicted only for certain “just causes.”

Since 2014, advocates have been working to get this legislation drafted and passed in the Boston City Council. This thesis seeks to understand why and how advocates proposed this act and what barriers it faces in implementation. I argue that despite gaining support from the Mayor’s Office and being an intentionally mild bill, opposition from large and small property owners and the real estate industry has shaped the conversation around the act, leading to both confusion and resistance to its passing. In this case study, I discuss the difficulties of drafting and passing progressive housing policy in increasingly unaffordable urban areas and the need for a broader conversation about the right to housing for residents.
“Only the Little People Pay Taxes:” Reforming New York City’s Property Tax Structure to Mitigate Inequality and Increase Efficiency

Across the U.S., property tax rates for rental buildings average 1.4 times higher than rates for homeownership properties. In New York City, the spread is 6.4 times. In a city where more than 50% of residents are rent-burdened, the Rent Guidelines Board estimates that fully 1/3 of rents are actually just passed-through property taxes. With both the Mayor and the Governor prioritizing housing affordability, reforming the property tax structure to better serve the City’s millions of struggling renters should be a priority.

This research examines how the existing property tax structure came to rule New York City, and explores its spatial outcomes across the five boroughs. Using data scraped from the 2015 property tax bills of every parcel in the City, this investigation finds that the Department of Finance deviates significantly from its publicized process when calculating tax bills, and moreover, that property taxes are poorly correlated with land, market, and assessed values.

This study also investigates options for reform, and finds that while there is no ‘silver bullet,’ there are a number of steps the city could take to mitigate some of the system’s inequities and inefficiencies. These include instituting a single tax rate system applied to assessed values; a two tax class system based on full market values; and/or an increased tax on high-priced units. Lastly, this examination finds that any move towards a more functional system will require broad-based support from grassroots to grasstops. The final chapter outlines a rough framework for building such a movement.
The Politics of Implementation: Towards a Pro-Poor Land Legalization Policy in Quito

Since its inception, the development of Quito has been at the mercy of the very few that owned land, with little regard for the greater majority who to this day continue to struggle for their constitutional right to the city. This thesis is my personal attempt to understand the historic and present relation between Quito’s political forces and the City’s lowest income groups. I explore Quito’s historical development of policies for informal neighborhood legalization to analyze the relationship between the national government, municipal council and low-income neighborhoods of the city. I follow Gilbert and Ward’s reasoning of regarding the State as a political entity, and its policies of land as a proxy of its relation to the most vulnerable populations (Ward 1985). I ask how constitutional and legislative arrangements have been implemented and operationalized to address the successes and failures of the land legalization efforts of Quito using a pro-poor framework.

I concentrate on the policies enacted by the last three Municipal administrations as well as Regulatu Barrio (Legalize your Neighborhood), the current program for legalizing informal settlements in Quito. While legalization policies have existed since the late 1980s, they were never fully operationalized due to the low capacity of the Municipality, clientelist practices and lack of continued political interest. Through a pro-poor policy analysis, I argue that following the ratification of the 2008 Constitution and other national legislation, the Municipality had a greater responsibility towards establishing a pro-poor policy towards land legalization, which resulted in an increase of legalized neighborhoods and basic infrastructure provision for previously informal settlements. I also show that while there appears to be continuity through Municipal administrations, difficulties for legalization remain, including evaluation mechanisms, overcoming obstacles of land traffickers and community organizations, and creation of a comprehensive policy for land and housing.
Home: Collecting Narratives, Building Relationships, and Making Change

Home as a concept can be viewed through the lenses of different fields of study: through psychology, by understanding the mental effects that the loss of home has on individuals; through history, by understanding how people have lived throughout time; through design, by considering physical living preferences; and through urban planning, which may best study the concept of home by integrating multiple disciplines. Urban planning is multi-disciplinary in practice: the planning process requires systematic views of understanding how policies, design decisions, histories, and lived experiences work together to shape today’s cities. Home is a crucial concept to consider in urban planning; it humanizes the lived experiences of every city-dweller, asserting that these places are not just places but homes.

Using visual and narrative-based methods, this thesis investigates how residents of one neighborhood define home. Ascribing importance of the home and the sense of home can lead to better understanding of the emotional impact processes of displacement have had on vulnerable communities equips planning and design practitioners with the capacity to sensitively approach the potential impacts on people’s homes.

The community of Watts in South Central Los Angeles, California serves as a case study for understanding what meaningful content collecting narratives on home can reveal. As my own homeplace, the thesis also operates as a journey of self-discovery in rethinking preconceived understandings of this concept. This research is both a personal and political statement about the power of maintaining quality of life for vulnerable populations through sustaining the homeplace. As an act to fight against displacement, the collected narratives reveal the important complexities of how individuals define home, ranging from individualistic, to relational, to spatial, and beyond.
State run home buyout programs are becoming increasingly popular as a means to prevent repetitive loss flooding to homes within floodplains. However, there are many local benefits associated with buyout programs, including the removal of services from the neighborhood, increased flood protection for adjacent neighborhoods, and increased green space for conservation and recreation purposes. With limited federal funding for these programs, policy designers make an effort to maximize these local planning goals. This thesis uses structured interviews, descriptive statistics, and mapping, to compare New Jersey’s Blue Acres buyout program and the New York Rising Buyout and Acquisition Program.

First, I compared the programs through the lens of 8 key policy decisions including parent institutions, funding sources, municipal relationships, community outreach, the offer package, cluster selection process, continued land management and future plans. Then, I used a common framework to compare 4 coastal municipalities that utilized buyout programs, including Sayreville, NJ, Woodbridge, NJ, Lindenhurst, NY, and Mastic Beach, NY. I found that the ability to achieve local planning goals were influenced primary by the program’s community outreach approach, site selection process, and its relationship with the municipality. As states design the next generation of buyout programs to deal with the increased flood risks associated with climate change, this paper will help guide buyout policy to achieve better outcomes.
Finishing the hottest year on record, which happens to be the third hottest year in a row, climate change at this point is indisputable. The need to adapt to a changing climate has become increasingly apparent in low-lying coastal towns and cities as the impacts from climate change including more frequent and powerful storms and rising sea levels intensify. The question of how small, dense, and highly vulnerable coastal communities stay in place, adapt, and build resiliency remains for the most part unanswered. I aim to shed light on this by employing a mixed method research design incorporating qualitative and observational methods in the analysis of climate adaptation planning on the barrier island of Long Beach, NY five years after Hurricane Sandy left the island devastated. Relying on theories of ecological resiliency that call to mind a ‘safe-to-fail’ approach rather than engineering resiliency’s ‘fail-safe’ mentality, I look at climate adaptation plans and projects on the barrier island through the framework of creating systems that anticipate and strategically design for failure.

I found that several challenges and obstacles stand in the way of achieving resiliency for the barrier island, including funding gaps, strict permitting processes, entrenched ‘home rule’, lack of coordination regionally, environmental justice and equity concerns, and the design of resource allocation. Resiliency planning in this context of separate, ‘one-off’ small adaptation projects within strict municipality boundaries, delayed by permitting and funding issues, can be seen as ‘too little, too late’. However, based on my analysis, I make recommendations for a regional approach to resiliency, whereby the various governing bodies of the island together devise a plan for the entire island as one landmass and natural ecology. This new regional entity would be in a position to consider a plan for strategic retreat of those most vulnerable socioeconomically from the places most susceptible to storm surge and sea level rise to safer ground within the same island, as well as to pursue other feasible approaches to creating resiliency for the barrier island of Long Beach.
Unlocking SEPTA Key: An Analysis of the Decisions Leading to a New Fare Medium

The Southeastern Pennsylvania Transportation Authority (SEPTA) is the sixth largest transit agency in the United States, serving 358 million passengers annually (APTA 2015). Despite its size, SEPTA is the last major transportation agency to change their fare medium from a token to contactless fare cards. Although the implementation is not currently complete for the Philadelphia Metropolitan area (as of May 2017), the ten-year process provides information for the decisions made that lead to delays.

This thesis explores the decisions that SEPTA made during the implementation timeline by exploring the process through a public administration decision making lens. Although a transit project of this size should expect some delays, they were prolonged due to funding difficulties, scope creep, technology obsolescence, bureaucratic inertia, technical issues, a lack of champion, unclear goals for implementation, and a risk-adverse nature enhanced by difficulties experienced by the Chicago Transit Authority. As the implementation enters the next phase, SEPTA should continue on its path of being transparent and explicit in announcing the delays for the system. There is a beneficial tradeoff of ensuring the tested marginal enhancement functions as expected with minimizing public disappointment and backlash.
Sowing Her Seeds: Imagining Transnational Social Movements in the Face of Global Capitalism

The process of neoliberal globalization has long been touted for its success in increasing connectivity the world over. However, a closer look reveals that while capital has rendered many borders invisible and gained a new flexibility, those most devastated by the unending need for profit remain largely boxed in. Political organizing is often constrained by a sectoral focus and an emphasis on hyper-local conditions. As the roots of multiple oppressions become increasingly entangled, we must also break our resistance free from boundaries and globalize our social movements.

In this project I depart from traditional social science methodology and use fictional storytelling to consider community impacts of neoliberal globalization. Synthetic case studies of three women of color protagonists from around the world urge readers to grapple with experiences of colonialism, race, gender, caste, class and sexuality, among others. The characters lives push readers to recognize the limitations to our current methods of political organizing and activism, and to imagining alternative possibilities and paths to liberation.
Performance of Metro-Based Transit Oriented Development (TOD): A Comparative Study Between Beijing and Singapore

The ways in which electricity is being generated, distributed, transmitted, and stored are undergoing unprecedented change. Proponents of a Just Transition — a transformation of the current fossil fuel-based system into place-based, sustainable, equitable, and democratically controlled economies — have attempted to capture the potential of these changes to realize a low-carbon electricity system through new and more equitable electricity generation and procurement models. Community Choice Aggregation (CCA) is one such utility-scale electricity service provision model in California that explicitly aims to reduce greenhouse gas emissions through the provision of locally produced and democratically controlled renewable energy that simultaneously catalyzes localized economic development. To date, limited academic research has been conducted to examine the barriers to realizing community choice aggregation. Furthermore, this research does not connect CCA to larger strategies for the reification of a Just Transition, nor does it identify policy levers to bolster community choice aggregators’ ability to deliver on their stated goals.

This thesis therefore examines the barriers to realizing community choice aggregation, and how can we transform those challenges into opportunities for deepening civic engagement and community wealth for (low-income) communities (of color) to further realize a vision of a just transition. To do so, I conducted semi-structured interviews with individuals essential to the creation of six existing and two emerging community choice aggregators in California. I find that exit fees, obtaining adequate bridge financing, rise averse municipalities, and ratepayer base instability remain persistent challenges to CCA formation. Additionally, I observe that for community choice aggregators, maintaining business functions and ensuring ratepayer-based revenue take precedence over catalyzing local economic development. Ultimately, I find that while the CCA market has experienced significant development, allowing them to provide ratepayers cost competitive renewable energy, community choice aggregators have not matured to a point where they are able to meaningfully catalyze economic development or deepen civic engagement in energy-related decisions at a local level. To address this issue, I propose federal and state regulatory changes to catalyze mutually beneficial “public-public” relationships between CCAs and electricity co-operatives to further advance a Just Transition, and help community choice aggregators deliver on their purported goals.
The Midwest Inland Port: An Impact Assessment

In Macon County, Illinois, one of the most recent and high profile economic development strategies involves the creation of the Midwest Inland Port (MIP), an inland port and intermodal facility. A privately owned public initiative, MIP is an infrastructure-strategy package. The infrastructure is privately owned by ADM, a multinational agricultural processor, but it was funded, in part, by a grant from the state of Illinois. However, neither the grant application nor agreement required an impact assessment of the facility. I argue that a unique confluence of place-based factors facilitated the creation of the MIP and that a preliminary impact assessment should have been included as part of the grant application and agreement, especially in light of the high expectations for the facility.

I propose a potential impact assessment methodology that considers transportation and economic impacts at the state, region, and county scales. I apply this methodology to MIP as an illustrative example. Though it is realistically too soon to determine the measurable impact of MIP, I show a means of measuring the potential impact on rail shipments and the potential impact on local residents. This research enumerates a methodology that examines multi-scale impacts of transportation projects; it explains how a confluence of factors aligned to create a hybrid economic development-infrastructure model; and finally, it raises the possibility of utilizing large transportation infrastructure projects as a means of understanding industrial relations in Illinois.
A Spatial History of Protest in Boston

The location of a protest is a crucial element in protesters’ ability to make their grievances or demands heard. Despite the significance of protest location and scholars’ emphasis on the importance of urban space in social movement mobilization, there is limited research on the spatial patterns of protest over time. This thesis utilizes the Dynamics of Collective Action dataset to identify, geocode, and map 421 protests, rallies, sit ins, and marches that took place in the Boston area between 1960 and 1995. In addition to identifying the location of protest events, this study classifies and analyzes protest space typologies. The analysis reveals the durability of university and government spaces as protest locations, as well as the Boston Common. In addition, it identifies the significance of Boston Public School desegregation as a catalyst for neighborhood protests during the 1970s, particularly in South Boston. This thesis concludes with a discussion of the mechanisms that shape the spatial patterns of urban protest and engages in a critical reflection on the consequences for urban planners and residents.
The Egyptian government’s announcement in 2015 of its plans to construct a New Administrative capital, to be known as Wedian City, is the latest example in a recurrent pattern of announced administrative relocations and satellite cities being constructed on the outskirts of Cairo. Previous relocations and new cities, planned to be self-sufficient and independent have only been partially successful, and in most cases remain reliant on the city or have now merged into the original city.

As plans move forward towards the development of the new Administrative Capital — this thesis examines the socio-economic, political and historical context in which this project has been announced and the urban context in which it is being implemented. Furthermore, it hopes to critically assess some of the advantages and disadvantages of the development based on the initial released documents.

The announcement and current move forward with the proposal for Wedian City is an opportunity to analyze a wide cross-section of topics pertaining to national, city planning challenges of both old and new cities in Egypt. Due to the scale and nature through which the project was placed into implementation, the proposal touches on various urban design topics and elements at various scales and levels. Upon a closer look at the proposal the project poses concerns if not addressed. Furthermore, since urban design is in many ways a tangible representation of current planning processes, and a physical transformation of the current state of affairs, conditions and priorities, the urban design of the new proposal will be given special attention within the context of the greater urban planning context.

To promote urban design outcome this thesis recommends additional considerations with regard to long-terms sustainability measures, more accurate outcome-oriented socio-economic accounting, and the integrated development of land-uses and urban components. The thesis uses the five principles of Good City Form proposed by Kevin Lynch throughout the process.
Urban Spatial Structure, Housing Markets, and Resilience to Natural Hazards

This dissertation consists of three essays on urban structure, housing, and environment. The first paper contributes to the existing debate on the co-location hypothesis by devising a proximity measure and controlling for a set of other urban form measures. Multiple regression analysis revealed that job-worker proximity leads to shorter commuting time. In addition, results from subareas suggested that the impact of job-worker imbalance and the impact of job-worker mismatch on the commuting time are both greater in the suburb in comparison with the city center. The second paper examines the impact of the LIHTC construction on nearby housing prices in the Boston metropolitan area by using the AITS-DID method. The paper found that the price gap between the LIHTC micro-neighborhood and the area beyond is reduced by approximately 16.5 percent points after the LIHTC construction. The segmentation of the analysis by sub-region showed spatially heterogeneous results. The findings from this research are contrary to the conventional perception that subsidized housing developments lead to neighborhood decline persistently.

Measuring resilience to natural hazards is a central issue in the hazard mitigation sciences. The third paper applied a confirmatory factor methodology to operationalize the biophysical, built environment, and socioeconomic resilience dimensions for local jurisdictions in large urban metropolitan areas in South Korea. The factor covariances showed a trade-off relationship between natural infrastructure and human activities. Densely developed and affluent urban areas tend to lack biophysical resilience. Some local governments, sorted into the same groups, turn out to be located in different metropolitan areas. The spatial variation and inequality in the resilience dimensions suggest the necessity of integrated and flexible governance for sustainable hazard mitigation.
Confinement in the Margins of the Margins: The Urban Design of Mass Incarceration

The historically unprecedented and internationally incomparable rate of incarceration in the United States merits an analysis of the prison and incarceration as a key political, social, economic, and physical institution in America. This research sits in the gap in the existing literature between sociological research on incarceration and architectural studies of confinement by turning my attention to urban design scale characteristics. It begins with the premise that the characteristics of the prison as a physical structure is entangled with the prison as cultural item, political tactic, and social concept. I ask: what is the urban form of mass incarceration? The question is investigated by focusing on a sample of 45 federal correctional complexes. Each complex is measured according to five metrics through the use of spatial data to address three scales: regional, city, and site.

To address the regional scale concern of incarcerated populations being placed far from their home communities and barriers to maintaining social connections, I measure each complex’s proximity to an urbanized area and accessibility to transit. I study the city scale concern of facilities being relegated to the remote and ignored margins by considering measures of visibility: distance to the nearest major road, and the number of nearby points of interest that may bring people within proximity of the prison. To investigate the building scale concern of the generous amounts of space correctional facilities demand, I measure the complex’s relative size to the hosting city. I find that correctional complexes are not well sited or designed to address the issues associated with all three scales. Analyzing the variation among the complexes, the results show that the facilities built during the rapid rise of incarceration share similar physical characteristics. Interpreting raw measures using metric-appropriate checkpoints, I find that even the relatively integrated facilities are in reality isolated and disconnected. Looking at the public comments and design descriptions for the facilities among the highest ranking and lowest ranking sites, I find that the design intention is to blend the facility into the rural landscape, and that the ability of residents to “forget that it’s even there” is seen as a design success.
Private Firms & Holistic Development in Second-Tier US Cities: A Case Study of Repopulating, Re-urbanizing Cincinnati & Pittsburgh

America’s secondary cities are enjoying a well-documented urban renaissance. New residents and their dollars are reversing decades of disinvestment in the urban cores of conventionally less attractive, mid-sized US metro areas. Rising urban populations are largely due to new residents flocking from the suburbs; flat or declining metro populations suggest the cities themselves aren’t becoming more competitive, but their urban areas are. Whether they seek a lower cost of living versus larger or coastal cities, or merely reflect the shifting preferences of millennials and empty nesters, many of these new urbanites say they seek vibrant and diverse living environments — value drivers that are sometimes undermined by unchecked private development in larger cities.

As public and private forces in these places grapple with how best to meet this emerging demand, second-tier cities present a tremendous opportunity for holistic, community-minded economic growth that isn’t possible in more competitive, established urban markets.

This thesis explores the ways in which market-driven real estate development can be uniquely holistic and long-term focused in re-urbanizing centers, while also being financially advantageous for the private firms that can lead the way. The paper analyzes the extent to which, unlike for-profit developers in cities with more established urban preferences, firms in these secondary cities engage in long-view, community-minded projects as a means of creating or maintaining social diversity, as well as the factors that seem to encourage or hinder such efforts. I also analyze the extent to which these civic-minded approaches are regarded as drivers of long-term financial stability by the firms considered.

Public-backed development corporations, creative financing tools, and proactive local institutions, foundations, and corporations all lay the groundwork for private developers to do projects that create or maintain urban diversity. Conversely, I find that still-low rents, political favoritism, and other challenges often make it difficult for projects in second-tier cities to justify investing in the public realm. I conclude by presenting ideas for new programs that can unlock holistic-minded, profitable development. These include crowdsourced funding for creative subsidies, programs that tie support for local entrepreneurs to public loans and grants, and responsible development consortia, among others.
Measuring Travel Equity and Representativeness: Opportunities and Challenges of Using Smartphone-based Travel Survey in Dar es Salaam, Tanzania

Dar es Salaam (Dar), the largest city in Tanzania, is one of numerous big cities in the developing countries that are facing tremendous development challenges: growing population, rapid urbanization and motorization, sprawled informal settlement, problematic informal transit operation, and poor and unequal infrastructure service. The fundamental problems in the mobility challenges of Dar are weak planning, deficient studies, and the lack of high-quality travel data. The thesis represents an effort to bridge this data and research gap by demonstrating the potential of using a smartphone-based data collection platform, Future Mobility Sensing (FMS), in the data-sparse setting of one African city. The thesis utilizes the smartphone-based travel survey data collected by the World Bank from 581 Dar residents for a 4-week period in November-December 2015.

To analyze potential value of such a data collection method, the thesis seeks to answer three questions: 1) how effective might such a data collection approach be in capturing the travel of different types of residents; 2) what is the travel pattern in Dar es Salaam revealed by smartphone-based platform (FMS) and how does it differ from traditional paper-based surveys; 3) how can such data richness contribute to systematically evaluate travel equity in Dar? The thesis not only identifies potential social and technical challenges in implementing smartphone-based survey in an African city, but also demonstrates the promise of such technologies in data accuracy and planning application. Important findings from this study include: this FMS implementation shows little sample bias in participation but some bias in the degree of participation among different socio-economic groups; the smartphone-based survey shows higher accuracy and resolution in depicting travel patterns than paper-based surveys; significant gender differences exist in travel characteristics; travel inequity is high in Dar; males, middle age individuals, people who have university or higher education, and people who have motorcycle driving license tend to have higher absolute travel welfare, while people who live in formal settlements and people who live closer to central business district (CBD) have higher travel effectiveness.
Implementation of Multimodal Electronic Payment Systems: Lessons from Los Angeles and Minneapolis-St. Paul

Adoption of technology in the public sector typically involves a balance of willingness to take on risk and the development of a forward-thinking agenda (Mulgan & Albury, 2003). Technology adoption in the public transportation sector follows this process and as a result, adoption can occur long after the technology is available. As in other sectors, technology has and continues to transform transportation in the US and around the world. Shared mobility services like bikeshare, carshare, and ride-sourcing services are now part of many cities’ mobility ecosystem, adding to the traditional modes of public transit, cabs, and private cars. Accessing these different modal options, however, require different payment media and separate mobile apps for each system to plan and pay for travel, thus creating a fragmented user experience.

Technological change in existing payment systems, specifically, unified or integrated payment systems, could improve the user experience and reduce the barriers to adoption of more modes of transport — including those that might be more sustainable. While integrated payment, or multimodal payment convergence, appears to be a hot topic among policymakers and practitioners, implementation in US cities has been limited. In my research, I seek to understand the potential barriers to and drivers of multimodal payment technology, studying the adoption of these systems in two regions, Los Angeles and Minneapolis-St. Paul. The research uses literature in the adoption of technology in transportation to contextualize the case studies in Los Angeles and Minneapolis-St. Paul. Through the exploration of these two cases, the research provides evidence that while payment technology has matured to enable multimodal payment systems, institutional factors such as limited coordination between public and private operators and organizational resource constraints remain barriers to implementation. However, incremental collaboration, vocal advocates, and federal funding support for multimodal payment systems might be used as strategies to overcome these barriers.
Transforming Industrial Heritage Sites in Major Chinese Cities: Reintegrating Minsheng Wharf into the Life of the City

China is a nation evolving through post-industrialization towards a cultural and innovation-based society. In turn, its urban form is grappling with a number of preserved industrial heritage sites in major urban centers such as Beijing and Shanghai. The People’s Republic of China has implemented policy through a culture-led approach in preservation and reuse, resulting in artist communities, museums, and creative offices. However, these sites have either become artifacts frozen in time or heavily commercialized tourist attractions that threaten to displace the creativity within.

This thesis investigates alternative approaches to preservation and reuse of these sites, especially how to integrate 21st century productive uses as a means of urban regeneration. The spirit of industriousness can be preserved within these sites by allowing new productive activities to occur. There is potential to bring high-tech industries into these sites which can benefit from the existing creative environment while increasing longterm economic viability and promote innovation. Collaboration is needed between the government and private developers to control the development direction of the site while allowing flexibility for innovative solutions. Opportunities exist in industrial heritage sites in major Chinese cities today that can bring them back into the life of the city.
In many parts of the Global South, including India, a significant number of informal workers, particularly women in the informal economy, engage in sewing, embroidery, and other forms of manufacturing work within informal segments of the textile and clothing sector. Despite substantial progress in labor rights and workplace safety regulations, the persistence of hazardous workplace conditions renders such workers vulnerable to potentially disabling forms of ‘Repetitive strain injuries’. ‘Repetitive strain injuries’ frequently result from poor ergonomic design of workplace equipment.

This thesis on India’s informal textile and clothing sector studies the usage of characteristics of workplace technologies at the organizational and individual levels, and their interactions with broader social and institutional arrangements that characterize informal sewing units. In partnership with Usha International Ltd. and SEWA (Self Employed Women’s Association) Bharat, the thesis demonstrates how context-sensitive ergonomic interventions can be developed for and with those working within the informal textile and clothing economy. The thesis achieves this by studying ergonomic risk from the bottom-up by using focus group discussions and key informant interviews, with the goal of (1) collecting both qualitative and quantitative information and (2) facilitating the unveiling of hidden rationalities that influence workplace decision making and studying their implications for technical and policy solutions.
The (Home)Sharing Economy: A Viable Solution to the Affordable Housing Crisis?

While it is widely known that our society is rapidly aging, the best way to ensure that people age with dignity, independence and security remains nebulous. Within 20 years, one out of three households in the U.S. is projected to be headed by someone over the age of 65, most of whom wish to age in their homes and communities. One possible mechanism to address both the present housing affordability challenge and the growing demand to age in place is the low-cost, self-help model of homesharing, where two or more unrelated people live together in a single dwelling. While the idea of homesharing is not new, a contemporary ‘homesharing’ match-up model emerged in the 1970’s to increase the incidence of shared housing in the U.S. However, this formal model known as agency-assisted homesharing, through which organizations pair older households with younger tenants, remains a niche phenomenon today.

This thesis addresses the question of whether, given the rise of the sharing economy and broad technology adoption, agency-assisted homesharing could become a mainstream practice in the U.S. The primary data source I use to address this question is an original Nationwide Homesharing Survey I designed and implemented in collaboration with the MIT AgeLab. The survey's 1255 complete responses, supplemented by 50 informational interviews with experts, policy-makers, and potential homesharers, suggests that a significant market for homesharing exists in the U.S. The paper reflects on the ways in which the contemporary sharing economy has facilitated greater trust between strangers, and suggests that a technology-enabled homesharing match-up program may enable broader adoption from older households who wish to remain in their homes and communities as they age, as well as increase the overall stock of affordable housing in the U.S.
When the mobile game Pokémon Go was released on July 6, 2016, few predicted the explosive effect it would have on public places, especially in cities. Overnight, the game brought forth legions of urban explorers who emerged from their homes to scour parks, sidewalks, and other real-world places in pursuit of virtual creatures to capture. These players were engrossed in a digital game intimately tied to real physical locations, and every place they went was transformed by their presence.

The urban public realm, on which this game was largely played, is more than a real-world game board; it has at least two vital functions for any city. Urban design theorists like Allan Jacobs have described in detail how public spaces can serve city inhabitants with physical comfort and social amenities. Meanwhile, urban political theorists like Henri LeFEBVRE have pointed out that public space is a crucial platform for the establishment of a democratic and equitable public sphere.

What happens to these functions when public space is overlaid by a ‘virtual’ digital dimension? This thesis explores in detail how the physical and political functions of urban public space were impacted by the release of Pokémon Go.

Research methods include a survey of public-space-related behaviors and attitudes among Pokémon Go players, and a pair of interviews with civic figures who work on Pokémon Go issues specifically. Further analysis includes development of a set of criteria for public space, drawn from literature about both its physical and political functions, by which the phenomenon of Pokémon Go’s release is then evaluated.

The results show that Pokémon Go’s effects vary considerably by location and individual attitude. But clearly its release caused significant changes in peoples’ use of public space, especially players. Furthermore, urban interventions using the game have the potential to make cities more equitable and their citizens more engaged.

The combination of public space with mobile gaming is likely to produce space that is more dynamic, flexible, and re-configurable than it is today. Public space in the city may soon become more complex – and more interesting – than ever before.
Housing Abandonment in Mexican Metropolitan Areas: Analyzing Planning Strategies to Reduce Housing Abandonment in the Metro Area of Guadalajara

This thesis examines the potential impact and limitations that current metropolitan efforts on urban planning in the Metropolitan Area of Guadalajara could have in reducing the high rates of housing abandonment the city currently faces. Previous efforts to reduce housing abandonment in the city have not delivered the expected results, and the metropolitan government of Guadalajara has laid out a new Metropolitan Urban Development Plan (POTmet) that seeks to rethink housing allocation and reduce home abandonment.

In this document I analyze POTmet’s housing allocation and abandonment strategies through interviews with key stakeholders involved in the elaboration process of the plan. I create a narrative around these interviews to understand how stakeholders’ interests translate into the final strategy outlined in the POTmet.

Later, I contrast these findings with previous efforts to reduce housing abandonment in Guadalajara and with the factors that are currently understood as determinants of the abandonment problem. I discuss what the success and limitations of the POTmet could be in reducing housing abandonment and conclude that, while the POTmet successfully brings together key stakeholders that could work together to reduce home abandonment, previous interests that have driven the abandonment problem in the city are still present in the new proposal. The POTmet also fails to target important contributing factors of abandonment, diminishing its potential for success. I discuss these findings and propose new lines of research and action that the City of Guadalajara can take to achieve its objectives to reduce housing abandonment.
My research sought to understand the impact of labor standards, or regulations, on restaurant business practices. I replicated a survey of full-service restaurants in Boston that was originally administered by T. William Lester in the Research Triangle Park and San Francisco in 2014 (2016). The survey featured fifty multiple-choice and short-answer questions for restaurant owners or managers about how they recruit, retain, and compensate employees, with a focus on the positions of server and cook. I hypothesized that, following the theory of dynamic monopsony, Boston would fall somewhere between the Research Triangle, with no locally-enacted labor standards, and San Francisco, with the highest labor standards in the country, on measures of wage variation and high road business practices. For servers, I found that wage variation in Boston was very similar to the Research Triangle likely because both regions have a tipped minimum wage that is much lower than the regular minimum wage. For cooks, the wage variation could not be explained by dynamic monopsony.

At the time of study, Boston had the highest regular minimum wage by twenty-five cents; but it had the most variation in wages and a much higher average wage than the other regions. My results can likely be explained by labor supply. A linear regression found that, at a 99% confidence level, restaurants that could easily hire cooks paid $2.33 more than restaurants that had difficulty hiring cooks, which suggests that some restaurants may offer higher wages in order to fill positions and retain workers. Another key finding, forty percent of the restaurants in my sample claim to follow high road practices, which is substantial but suspect partly because there are discrepancies between my data and a survey of Boston area restaurant employees that was recently completed by the Restaurant Opportunities Center (2016). Ultimately, I recommend that the City of Boston, or an appropriate intermediary, craft a career ladder strategy for current restaurant workers and city residents in collaboration with local businesses, while establishing programs to ensure that the businesses offer high quality jobs to newly-trained employees.
Do Place-Based Interventions Displace Crime in Cities? An Evaluation of Multiple Approaches in Chihuahua, Mexico

Scholars and practitioners have traditionally been skeptical of place-based crime prevention and reduction interventions because they can potentially displace crime to other times, locations, settings, or crime events. However, only few empirical studies have successfully demonstrated crime displacement, and when found it has tended to be less than the benefits of the intervention. Some scholars have even differentiated between benign and malign displacement, the former referring to socially acceptable redistribution of crime and the latter to producing worse outcomes than without the intervention. Existing scholarship in sociology and criminology has found that interventions more commonly produce a diffusion of benefits in the form of a reduction of crime in areas adjacent to the intervention, through deterrence or discouragement.

This study analyzes crime displacement following both public and private place-based interventions in Chihuahua, Mexico, a city whose crime rates catapulted as a result of the Mexican War on Drugs. The first intervention considered here is that of gated communities, privately initiated responses that now house around a tenth of the total population of the city. The second intervention type studied centers on public sector initiatives. Here the thesis presents a spatial analysis of the National Program for the Social Prevention of Crime and Violence (PRONAPRED), a publicly funded situational-prevention strategy that transfers funds to local actors working on crime prevention. Using empirical evidence from these two intervention typologies, this thesis focuses on identifying whether or not there is spatial displacement of crime. The results of this study do not identify significant crime displacement nor diffusion of benefits from interventions to adjacent areas, except for pedestrian robberies, which increase around gated communities but decrease next to PRONAPRED interventions. However, controlling for other factors, it finds that marginalization levels and the presence of community-based interventions impact crime displacement.
Over the past 75 years, the United States’ housing stock has become increasingly bifurcated, with the overwhelming majority of units taking the form of single-family homes or mid- and high-rise apartments and condos. This trend has made scarce the kinds of low-rise, moderate-density typologies that had historically provided the dense, compact urbanism necessary to support transit, walkability, and neighborhood retail. Dubbed the “Missing Middle” by their advocates, these housing types — townhouses, duplexes, courtyard apartments, and the like — are championed for their potential to deliver the benefits of residential density in forms that are more compatible with the character of existing suburban neighborhoods than their larger multifamily counterparts. They are also promoted for their ability to improve affordability in hot housing markets through the incremental addition of smaller units and improved land use efficiency.

This thesis seeks to explore the concept of the Missing Middle including the characteristics of its forms, the trends in its permitting and construction, and the barriers to its development. Focusing on Greater Boston, and three of its suburban towns in particular, the research draws on census data analysis and semi-structured interviews to understand the distribution of this housing in the region, the extent to which its development lives up to the claims of advocates, and the potential reasons for its decline. Results indicate that while Missing Middle units have historically been concentrated in cities in Greater Boston’s urban core, some suburbs are experiencing an increased interest in their development. However, in many cases, recently constructed examples of the Missing Middle in suburban contexts do not achieve the walkability and affordability goals of its supporters. The research finds that barriers to the permitting of new Missing Middle units in the suburbs are largely regulatory in nature, stemming from density restrictions driven by fiscal zoning considerations and homeowners’ opposition to growth, especially in wealthier communities. These findings point to the need for strong regional planning to work across town boundaries, loosening restrictive local zoning while developing adequate protections for neighborhood character in order to promote Missing Middle housing as one element in the development of smart growth and affordability plans and policies.
Gentrification in JP/Rox: Seeking a Collaborative Local Process for a Regional Problem

This thesis takes a case study approach to explore gentrification in Boston, the policies designed to mitigate it, and the public participation process by which these policies are crafted and implemented. It focuses on the JP/Rox planning process in the Jamaica Plain and Roxbury neighborhoods of the city through interviews with neighborhood residents, local organizations, and city policymakers who were involved in the process. In particular, the thesis explores the inherent tension between urban planning’s contemporary commitment to local decision-making power and a regional problem such as the housing market. In order to obviate the collective action problem of diffused benefits and concentrated costs created by this local/regional dichotomy while maintaining a commitment to local input and knowledge, interviews with stakeholders suggest a more collaborative approach to local planning may be necessary.

In particular, such an approach would entail a focus on convening appropriate stakeholder groups, engaging in joint fact finding, generating creative trades among parties, implementing agreed-upon goals, and joint-monitoring of outcome metrics. This restructured process of public participation would require a more active governmental role in organizing the public, and require trust from city policymakers and neighborhood residents alike, but could achieve greater buy-in for larger regional action at the local level.
A great deal of research has scrutinized the mixed legacy of staging “mega-events” such as World’s Fairs (or Expos) and Olympic Games. Host cities regularly invest billions of dollars building the facilities and supporting infrastructure needed to accommodate millions of visitors over a fixed period of time. In doing so, they also consume hundreds of acres of land, including large masses of urban space in which core activities are clustered. An analysis of urban mega events over the past century and a half indicates that numerous host locations have converted core event grounds into large urban parks. This thesis investigates the post-event reuse of urban parks built on these fairgrounds.

Through investigative research, interviews, and on-site fieldwork of selected post-event “legacy” parks, prevailing issue areas concerning their viability and accessibility are identified. Drawing on the experiences of Flushing Meadows-Corona Park, a large park built on the former grounds of two World’s Fairs in New York City, this thesis suggests strategic public space reuse and management approaches for Flushing Meadows and other legacy parks confronting similar challenges. The idea that post-event parks must be preserved as democratic and accessible civic spaces is stressed, particularly in light of increased privatization of the urban public realm.
The striking contrast between two Chicago neighborhoods Hyde Park and Englewood which exist side by side is a prime example of what Edward Soja calls socially produced geographies of institutionalized racial segregation and what David Harvey terms as territorial injustice. Hyde Park with about 26,705 mostly white residents is a thriving economic center that has realized gains in property values and commercial investment. Less than a mile away, Englewood, over the past 50 years has experienced declining populations, lower densities, lower property values, and increased vacancies that border Hyde Park, creating clear spatial lines of uneven development. Englewood has one asset that Hyde Park does not: two public transit lines, the Green Line and the Red Line.

In this thesis, I ask the question, can public transit be used to challenge uneven development and segregation in low income communities? I argue that public transit does not create growth, it merely redistributes it, and without the necessary development preconditions, the maximized benefits of public rapid transit in segregated communities will be hindered by persistent racial and residential segregation. I provide evidence to support that unless there is an intentional effort in conjunction with the Red Line Extension designed to minimize residential and economic segregation, the expected benefits of transit-oriented development and economic revitalization in Chicago’s African-American neighborhoods will be greatly limited. Such a plan might include providing tax incentives for local businesses near transit, investing in creating job centers along public transit corridors, investing in affordable housing near transit stations, investing in public-private developments and joint developments in conjunctions with transit stations.
Understanding the Effects of Inclusionary Zoning on Housing Markets Using a Stock-Flow Model

In this thesis I demonstrate how different housing markets would react to an exogenous shock of inclusionary zoning. I develop a stock-flow model of housing based on the model presented in Wheaton (1999). In this model, the degree of durability, elasticity of supply of new construction, and rental elasticity of demand of housing can vary. Various experiments were conducted to understand the dynamic behavior of different (hypothetical) housing markets after the introduction of an inclusionary zoning shock. The above mentioned study is supplemented with an analysis of Boston's inclusionary development program, and its impact on the residual land values. Detailed financial analysis was undertaken for three prototypical projects, to study how residual land values would change for varying levels of inclusionary zoning requirements. The overarching goal of the thesis is to add to the existing literature on the economics of inclusionary zoning, and to produce material of pedagogical value for students of urban planning and real estate, and also relevant policy makers.
Evaluating the Effect an Anchor Institution Can Have on a Small Shrinking City: A Case Study of Albion College and Albion, MI

This thesis examines the efforts of Albion College, a small liberal arts college, to revitalize Albion, MI, a small, post-industrial city. It evaluates the nature of the college’s involvement in light of a taxonomy developed by Rita Axleroth Hodges and Steve Dubb in their book, The Road Half Traveled: University Engagement at a Crosswords. Using this taxonomy, the thesis evaluates seven key issues and determines that Albion College is primarily acting as a leader on its community engagement efforts. However, on some key issues the college is acting as a convener, seeking to find and build the capacity of the City and other organizations within the community. Durable anchor institution engagement requires leadership support, involvement of faculty, staff and students, and commitment of alumni. There are signs that Albion College’s community engagement is beginning to help revitalize Albion, MI, but additional time is required to determine the impacts and durability of the efforts.
Here There Be Dragons (HTBD) is a podcast and new media thesis project on the ways in which fear, anxiety, and insecurity change resident perceptions of public space in cities and their use of these spaces. This season of HTBD centers the experiences of thirty-two natives, transplants, and immigrants to the Parisian region (Paris, France and its surrounding suburbs). This season features eight twenty to thirty minute episodes, which collage together overlapping concerns of the residents. Each episode has a theme ranging from terrorism and public policy to gentrification, social codes, and urban design. Each episode also includes interviews with several researchers to highlight social, cultural, and political nuances that are emphasized by residents’ experiences. The project also features a website (htbdpodcast.com) with supportive materials for listeners, such as a glossary of terms, readings, and a newsletter. The written thesis chronicles the methods and processes used to realize the podcast and concludes with reflections on the value of podcasting for urban design and planning.
As the fastest urbanizing continent in the next three decades, Africa is projected to play a major role in the global economy. The upward trend in the influx of foreign direct investments is set to continue thanks to an overall stable political and macroeconomic climate on the continent and microeconomic reforms in many countries. The country of Rwanda stands out for its reforms to ease business and for its attention to spatial planning as they relate to global competitiveness. The extensive master planning process for its capital Kigali exemplifies the city’s aims to integrate its economy in the global market through strategic physical developments including heritage preservation.

This thesis interrogates the references to and the inclusion of heritage preservation in the planning priorities of a post-colonial, post-conflict and developing city like Kigali aiming to operate as a global city. The plans for the “Nyarugenge Heritage Village,” currently an active wholesale trading center, will serve as a case study to assess Kigali’s intentions to balance its local culture with its participation in the global economy. The case study is discussed through a content analysis of city master plans and interviews with planning stakeholders as well as with store owners in the trading center. The analysis reveals heritage preservation is primarily meant as a tourism attraction and an economic development strategy. In light of this conclusion, the thesis ends on a discussion of a holistic planning process which could achieve a better balance between local culture and global economic development.
In my thesis, I attempt to study the implementation of Mahatma Gandhi National Rural Employment Generation Act (MGNREGA) in the states of Andhra Pradesh and Telangana, India. It is a labor law and social security measure launched in 2005. My focus is on contrasting traditional vs. multi-level governance structures, actors and interactions amongst them. How do politicians and bureaucrats work together at the grassroots for the implementation of a large-scale welfare scheme? What are the technocratic and non-technocratic nuances that affect their behavior? What is the role of unorganized citizen-citizens and organized civil society? How were all these actors able to interact in a way so as to make Andhra Pradesh and Telangana stand out in the aspects of implementing social audits and reducing wage payment delays?

My findings show that strong political leadership from the top and an extensively active and aware civil society at the grassroots, in the presence of a committed bureaucratic environment seem to be an instrumental factor. However, it is not as straightforward as it might seem. Social, political, and administrative dynamics differ from the state/central level to the local level, as the roles of different actors and the extent of their influence on others change. I conclude by studying these nuances in more detail for the specific context of Andhra Pradesh and Telangana, in terms of its administrative structure at the local level, hiring of contract employees in place of government employees, and an extensive formally organized social/community network.
Municipal waste management programs can be a lever for influencing the environmental consequences of material consumption, but only handful of cities in the U.S. have begun to use waste management towards these ends. This dissertation asks why. Specifically I ask if Seattle, a city known for sustainable waste management, differs meaningfully from Boston, a city with average waste and recycling programs. If so, how? And, what enabled Seattle to fundamentally change its waste system?

In order to analyze the two cases, I build on Zsuzsa’s Gille’s (2007) theory of waste regimes. The U.S. is dominated by a “weak recycling waste regime” that prioritizes hygiene, sanitation, and efficiency, while allowing limited post-consumer recycling of a few materials — paper, glass, metal, and plastic — regardless of the environmental efficacy of doing so. Using the weak recycling waste regime as a framework, I find that Seattle’s high diversion rate is a signal of deep institutional changes to its waste system.

In the 1980s, a disposal crisis in Seattle led to a public dialogue about garbage, through which the problem of waste in the city was redefined. Traditional problem frames of sanitation and disposal gave way to new problem frames about the value of waste materials and the environmental costs of squandering waste through incineration or burial in a landfill. The redefinition process led to a new set of institutions for governing waste, including waste reduction goals, autonomy for programmatic experimentation, and new roles and responsibilities for citizens and the state.

Through a similar crisis in Boston, city leaders retained traditional views of waste management. Limited planning and limited public input helped to maintain focus on conventional concerns about cleanliness, sanitation, and efficient disposal.

Seattle’s transformation has given rise to an “alternative wasteway” — a system that is institutionally organized to resist the weak recycling waste regime. Within Boston’s “mainstream wasteway,” the city’s waste system operates as we would expect given the dominant regime. The “municipal wasteways” draws attention to the institutional changes that support infrastructural change. It can be applied to any city in any context, and could be expanded to include other urban systems.
Capturing Environmental Innovation through Industrial Cluster Programs in the United States

A number of formerly industrial urban centers in the Midwest — aiming to strengthen their economic base, adapt to changing natural resource concerns, and tap into sectors with the potential for innovation — are cultivating industry clusters of water-related technologies. Advocates of these cluster-based strategies strive to increase local and regional competitiveness by building links among relevant companies and local institutions, while also upgrading the conditions of the business environment that raise productivity and innovation. This study examines the trajectory of two water technology cluster initiatives from their initiation in the mid-to-late 2000s to the present: The Water Council, based in Milwaukee, Wisconsin, and Confluence, based in Cincinnati, Ohio.

Despite the central importance of geographic concentration and infrastructure to the economic rationale behind clustering, processes of spatial planning and development have generally received limited attention in the study of cluster programs.

In these two cases, I trace how abstract visions of cluster dynamics were translated into interventions through the planning and regulatory mechanisms — and their associated politics — governing the built environment in each location.

Using interviews and qualitative analysis of planning and administrative documents, I find that each cluster development program evolved in relation to the available physical assets of key institutional partners. In Milwaukee, the process of identifying cluster priorities among levels of state and regional institutions produced a regionally driven initiative closely tied to redevelopment powers at the level of the City of Milwaukee. The result was that the cluster program developed toward an eco-industrial park and innovation district model that supported quality of life and attraction goals for both city and industry leaders. In Cincinnati, water innovation efforts were not translated into land redevelopment planning yet ultimately found a niche in the needs of regional utilities. The resulting strategy and set of spatial interventions evolved toward a network of test beds and sites along water bodies impacted by contamination, a geography corresponding to the assets of regional utilities and environmental resource management entities.
Rule by Exception: Development, Displacement, and Dissent in Greater Kuala Lumpur, Malaysia

My thesis looks at the relationship between development, displacement, and dissent in Greater Kuala Lumpur, Malaysia. Barring a brief four year period, independent Malaysia has continuously operated under a near-permanent state of constitutionally imposed emergencies. I look at the operation of one of the emergency regulations, the Essential Clearance of Squatters Regulations (ESCR, promulgated initially in 1969 and used until 2013) for the purposes of displacement and urban planning. Relying on archival research, interviews, and an in-depth case study, I seek to characterize the nature of urban development, particularly the operation of the law, in Kuala Lumpur. I make three broad arguments:

1. The use of squatter regulations for the purposes of urban planning started with the colonial emergency of 1948, when urbanization and development were used as primary elements of a military strategy to combat the Communist emergency.

2. Post-independence, however, the Malaysian state has increasingly used laws meant initially for counter-insurgency operations for the purposes of development. I argue that the urban planning in Kuala Lumpur must be seen as a form of urban law-fare (the use of techniques of war for political or economic ends; Comaroff, 2001) and that the creation of a “state of exception” (Agamben 2005), through the declaration of emergencies, has enabled the use of military ends as a normal technique of government.

3. Lastly, I look at the case of Kampung Berembang, perhaps the only successful case of resistance against the use of ESCR. I argue that the residents’ re-positioning of themselves as peneroka bandar or urban pioneers (as opposed to squatters) was critical to reclaiming their rights as citizens.
Increasing Saudi Females’ Accessibility to Employment via Car-pooling in Riyadh: Measure the Realistic Commute Cost by Network Computing Methods and Investigate the Share-ability based on Actual Taxi Trip Data

Due to the driving ban as well as to social restrictions on their movement with male drivers, Saudi women have to rely on either male family members or the employer’s shuttle bus; otherwise they hire a driver or take the taxi. These few options pose high commute cost on Saudi females, hence their access to economic opportunities is restrained, especially among lower car ownership segments. Such restrictions have negative influence on Saudi females’ employment. The employment rate of Saudi women is only 22%. However, no previous research has quantitatively investigated the commute cost as a financial burden and barrier to job participation for Saudi females.

Taking the capital city Riyadh as a case study, this study will (1) develop methods to measure the realistic commute cost (in time and money) by different transportation options for Saudi female residents in different job sectors. (2) Using the notion of accessibility, it examines the spatial mismatch between Saudi females’ concentration and their job markets. (3) With spatial analysis of the potential market, it demonstrates ridesharing’s capacity of providing greater access for women in Riyadh. (4) Lastly, it also looks at the feasibility of developing ridesharing programs based on network analysis of current taxi trips. This study sheds light on implications for policy makers and ridesharing service companies to reduce Saudi females’ commute cost so as to increase their access to economic opportunities.
Both long term and more recent socioeconomic, demographic, and cultural shifts have led to changing household formation patterns. Alongside a rise in living alone and adult children remaining in their parental homes have been increases in doubled-up or more-than-one-family households and non-family households. However, U.S. zoning codes and housing markets have long favored single-family homes and living arrangements. Have cities adapted to changing household trends? If so, how? Whether they have or not, what influences their responses? This thesis addresses these questions through a qualitative analysis of the occupancy standards—specifically family or household definitions, limits on the numbers of unrelated people in a single-family dwelling, and spatial requirements—of twenty-four cities across the country and deeper analysis of selected case studies.

The findings show a range in approaches to relationship-based occupancy standards that indicate some acknowledgment of different household structures, but most codes still favor traditional families defined by blood, marriage, or adoption. Both relationship- and space-based occupancy standards are often supported for health and safety reasons or to “maintain neighborhood character,” but these reasons and the typically arbitrary enforcement of these codes often favor wealthier homeowners or have exclusionary intents and impacts. The discrepancies between occupancy standards and household trends have important implications for the form, availability, and affordability of the current and future housing stock, neighborhood dynamics, and the housing security of households in cities nationwide. I argue that planners need to be aware of and resist the normative biases and assumptions about families and homes ingrained in most zoning codes and offer recommendations for planning practice with regards to occupancy standards for single-family dwellings that support more flexible, equitable, and inclusive communities.
Lyndsey Rolheiser  
Dissertation Advisor: Albert Saiz

Three Essays on Urban Economics

The three chapters contained in this dissertation represent a body of work concerned with ubiquitous municipal issues that affect the economic health, vibrancy, and stability of municipalities. These issues are generated through the interaction between agents within the municipality and the built environment of the municipality.

The first chapter investigates the role of postwar housing characteristics in neighborhood decline. Extant literature hypothesizes that postwar vintage specific housing characteristics are contributing more to observations of decline than general housing age as the postwar home is no longer aligned with current consumer demand. I address this hypothesis by empirically separating aging and postwar vintage effects at the neighborhood level. Findings indicate previous empirical results linking postwar housing to decline confounded the age and vintage effect. Once separated, the postwar vintage effect is not a significant source of neighborhood decline as housing age is the driving factor.

In the second chapter, I explore the relationship between development patterns and municipal expenditures. Measures that capture the multi-dimensional aspects of land use patterns exist within the planning and landscape ecology literature but have not been applied to the ‘Cost of Sprawl’ discourse until now. Using a unique GIS data set covering all of Massachusetts, I construct measures of separation, continuity, centrality, integration, and concentration of residential and commercial land uses within municipalities. Findings suggest some aspects of land use patterns championed by Smart Growth and New Urbanism advocates produce lower levels of municipal expenditures per capita as compared to more sprawling development patterns.

The final chapter focuses on the issue of property tax incidence. With increasing reliance upon commercial property tax revenue, it is important that municipalities fully understand the implications of such reliance especially when it comes to attracting and retaining local business. Existing literature on commercial property tax is limited and only a small handful of studies focus on the issue of commercial property tax incidence. I contribute to this slim literature by asking one question in particular: who does the commercial property tax burden fall upon? Based on data from 96 Massachusetts municipalities over 26 years, I find nearly 100% of the burden is passed through to the renter.
De-Gentrifying the Streetscape: Reclaiming Tactical Urbanism for San Francisco’s Tenderloin

San Francisco’s Tenderloin neighborhood is often described in classic “skid row” terms as a neighborhood characterized by crime, prostitution, drugs, homelessness, seedy hotels, and rampant blight. It is described as ‘hopeless,’ ‘lost,’ and a place to be avoided at all costs. In reality, the Tenderloin is a more complex neighborhood than a simple skid row definition allows, with a rich fabric of social dynamics, built form, local heroes, and powerful villains. In 2017, the Tenderloin is also perhaps the last ‘genuine’ neighborhood in San Francisco, having never found great success in pretending to be anything other than a source of shelter for the working-class, poor, immigrant, homeless, drug addicted, mentally ill, queer youth, and other vulnerable populations. While the historic culture bearers of other San Francisco neighborhoods have been gradually pushed out by younger, richer, tech-affiliated residents with little understanding of the historical context they have settled in, the Tenderloin has managed to retain its intrinsic grit, codify its historic artifacts, and ward off attempts to soften or commodify its rough edges through gentrification.

Given the rapid rate at which income inequality and low-income displacement is transforming the social conditions and power dynamics within neighborhoods throughout San Francisco, this thesis uses the Tenderloin as a living laboratory for answering the flowing questions: To what extent has the Tenderloin resisted the forces of gentrification that have meanwhile infiltrated bordering neighborhoods such as Union Square and Mid-Market? What are the physical and social design qualities of the Tenderloin neighborhood that have allowed it to resist whole-sale changes to its function as a provider of affordable housing and shelter for San Francisco’s most marginalized and vulnerable populations? To what extent does the urban form of the Tenderloin allow for continued resistance of gentrification, and what role(s) does it allow for planners and designers to assist in curating this continued resistance?

This thesis begins with a field study of the neighborhood’s public realm, undertaken in January and March of 2017. The resulting observations and conversations with public realm users served as the primary data source for the research, along with secondary data sources on the Tenderloin’s development history from its reconstruction after the 1906 earthquake to the present. From these findings, this thesis concludes with a series of public realm design principles for preserving the Tenderloin as a sustainer of low-income people and as a shelter for those beyond the scope of the tech industry’s viewfinder.
Matching Transit and Open Public Space: Open Space Oriented Transit for Successful Transit Oriented Development in Guadalajara

The way we perceive the urban environment affects the choices we make and therefore our behavior. This has an important effect when we navigate a city. How urban spaces are laid out will influence our decisions and have repercussions in our travel choices. There is then a connection between the urban spatial experience and transportation systems.

With a large number of cities looking into transit oriented development (TOD) — an urban model whose goal is to align urban development to public transportation patterns by creating walkable, mixed and diverse neighborhoods — as the leading planning solution to solve their accessibility problems, the connection between the urban image and the transit system is crucial. If planners want to attract people closer to transit systems and increase ridership, they will need to improve the perception people have about their system and further construct a modified set of travel preferences.

The urban space and the process of navigation are, in general, composed of paths and nodes; by linear elements related to movement and punctual elements that define origins and destinations. From different types of nodal elements, open spaces have a particular condition; their openness allow people to perceive a larger portion of their surroundings easing the process of wayfinding and enhancing the sense of place that is highly valuable for the construction of true communities.

This thesis explores the role of open spaces not only as attractive urban amenities and recreational spaces, but as organizing elements of the territory and anchors for the transit system arrival points. I explore Guadalajara, Mexico, a city with an important central network of open spaces. The city is currently experiencing a significant investment in transit and is looking towards TOD for its planning solutions. I intend to use the city as a mean to show how open public spaces can be used as primary elements to structure transit systems and to enhance the creation of place around stations.
**Socio-Spatial Entanglement Theory, the I2S2A Method, and Civil Legal Service Realized Accessibility**

Most spatial and social service accessibility studies are unidimensional; they examine one dimension of service accessibility in isolation. These unidimensional studies are not responsive to the realities of service usage. This is because unidimensional service accessibility studies implicitly assume that spatial and social service accessibility factors are not entangled with one another. Everyday experience and common sense conflict with a unidimensional conceptualization of service accessibility. For instance, the ease of traveling twenty-five miles to receive a service is different for the single dad receiving public assistance with no car and the single adult who has stable employment and a car. In fact, many types of differences between users could result in substantive differences in how service accessibility is experienced.

I develop a theory, socio-spatial entanglement theory, and method for realized service accessibility research. Socio-spatial entanglement theory is a way of theorizing service accessibility that accounts for the why and how of service accessibility. Socio-spatial entanglement theory posits that spatial and social service accessibility factors are necessarily entangled and that these entanglements capture and explain the lived-experience of service accessibility. This theory is based on applied Critical Realist conceptions of the ontology of the social world.

I also develop a method, the integrated, interactive socio-spatial accessibility (I2S2A) method, to explain socio-spatial entanglements and generate explanations of the why and how of realized service accessibility. The I2S2A method is informed by Critical Realist understandings of how researchers can know the social world.

Lastly, I apply socio-spatial entanglement theory and the I2S2A method to explain the factors and causal mechanisms that mediate civil legal service usage amongst low-income households. These explanations allow policy makers and civil legal service providers to design interventions that target the underlying phenomena that impact service usage in furtherance of increasing realized access to civil legal services.
In 2009, President Barack Obama and mayors around the country pledged to end veteran homelessness by 2015. Although their collaborative efforts led to a dramatic decrease in the rate of homelessness among veterans, the number of homeless females peaked during the same period. The federal and state governments have increased the amount of permanent supportive housing units to address this rising homeless population, but experts have cited several reasons for stagnant rates of homelessness among female veterans. Many female veterans are unaware of housing opportunities, confused about identifying as a veteran, and/or perceive veteran housing as incompatible. Reasons for the perceived incompatibility of veteran housing by female veterans include the impression that it is an unsafe living environment, inaccessibility to supportive services such as childcare, and a lack of privacy.

This thesis is a comparative case study of three veteran housing developments in Boston: Patriot Homes, New England Center and Home for Veterans (NECHV), and Brighton Marine. These cases explore how developers in Boston navigated the development process to provide housing for female veterans. This thesis examines such obstacles to building veteran housing as general development barriers, permitting issues, design requirements, and funding needs. Several recommendations for ending female veterans’ homelessness are offered and focused on improving the development process using design, data, and policy.
Re-Imagining Planning in the Indus River Basin, Punjab, Pakistan

The Government of Punjab has identified the need for integrated and multi-sectoral water management to achieve efficient, equitable and environmentally sustainable use of natural resources in the Indus river basin in the province of Punjab, Pakistan. However, no clear roadmap for how multi-sectoral, ‘integrated’ water management can be implemented exists. Focusing on irrigated agriculture in Punjab, this thesis uses a combination of historical, institutional and empirical analyses to investigate how ‘integrated’ food and water planning can be achieved in Punjab. The historical analysis traces how the idea of ‘integration’ has evolved in Pakistan’s colonial history and within the province of Punjab after independence. It reveals that both the departments of irrigation and agriculture have highlighted the need for vertical and horizontal integration within and between the departments throughout their existence and various institutional configurations, like the creation of the On Farm Water Management directorate and introduction of participatory irrigation management, have been introduced in an effort to achieve this integration. The institutional analysis explores how planning is done within and across the provincial departments of agriculture and irrigation. The analysis finds that currently only the provincial tiers are responsible for planning within the two departments while the meso- and micro- scales are primarily responsible for management and operational functions. Coordination between the departments is limited to operational functions only since spatial misalignment between their boundaries at sub-provincial levels is a big hurdle to integrated planning. Coordination between the departments happens by way of the provincial Planning and Development department as the final approver of their proposed plans. Finally, the empirical analysis uses annually collected departmental data to develop metrics that can enable integrated planning of irrigated agriculture. In conclusion, this thesis builds on the historical, institutional and empirical analysis to propose recommendations for how planning in the Indus River Basin of Punjab can be re-imagined.
A New Climate for Regionalism: Metropolitan Experiments in Climate Change Adaptation

Climate change threatens the function and even existence of coastal cities, requiring them to adapt by preparing for near-term risks and reorienting long-term development. Most policy and academic interest in the governance of climate adaptation has focused on global, national, and local scales. Their efforts increasingly revealed the need to plan for adaptation at the scale of metropolitan regions. This dissertation is the first academic comparative analysis of U.S. regional adaptation initiatives. Drawing on multi-method qualitative research of five coastal regions, I ask: are collaboratives to coordinate adaptation at the regional scale a new form of regionalism? What roles do state policies on climate change and regional governance play?

I argue that adaptation collaboratives are an ecological variant of new regionalism that re-centers the role of public agencies in advancing adaptation efforts. Adaptation champions have helped overcome limited local adaptation, even where states are antagonistic to climate action, by sharing knowledge, providing technical assistance, and fostering political support.

However, most have yet to tackle the limitations of local adaptation. Instead, they have deployed narratives of climate change as predictable and manageable, and of regional adaptation as localized and ecological in ways that mask the need for more transformative developmental and governance paradigms. Only places with regional agencies or county governments that have land use authority, fiscal leverage, or state mandated targets have advanced region-wide zoning and long-term developmental changes. This indicates that state policies towards regional planning institutions are more influential in shaping regional adaptation than those focused on adaptation.

Scholarship has shifted away from debates around forms of regional government, but these findings highlight the need to strengthen regional government in order to overcome difficulties in coordinating, implementing, and enforcing multi-sector and multi-jurisdictional responses to climate change. I conclude by calling for a renewed ecological regionalism that articulates a vision of regions functioning as an ecological whole, rather than as the sum of individual parts. I offer recommendations for how collaboratives and other advocates could build awareness and open dialogue about regional interdependence, conflicts, responsibility, and accountability. These processes become pathways to envisioning local preferences for regional governance, build buy-in and coalitions, and advocate for state enabling legislation.
Since the mid-1990s, thirty to forty-year-old nuclear power plants have been reaching their designed lifetimes. Many operating licenses, however, are being extended after regulators review safety considerations and environmental impacts associated with each extension. These regulatory reviews have become quite controversial, not just in the United States. I examine why this is the case. I analyze a number of controversial nuclear license renewal cases in the United States and South Korea — countries that are quite different in terms of their regulatory frameworks, electricity markets, safety requirements, and ways in which they engage the public in relicensing decisions.

My findings are: 1) regulators, utility managers, nuclear professionals, and policy-makers in any country with aging nuclear plants are likely to face opposition from groups that do not trust the typical risk and safety assessment studies used to justify license renewals; 2) nuclear license renewal decisions are particularly prone to conflict if stakeholders are not involved early enough, and if they perceive that their concerns are repeatedly overlooked (on the grounds that only the results of professional risk modeling are valid); and 3) the credibility of license renewal decisions will hinge on site-specific information and local knowledge, not just generic national environmental impact or risk assessment studies. Stakeholders want an opportunity to focus on issues that are most important to them, particularly site safety, given the uncertainties involved in assessing the risks with continued operation of plants that had a limited design life. Only if there is an earnest effort to engage potentially affected stakeholders, with the assistance of a neutral facilitator, can nuclear plant relicensing facilities be avoided.
Despite the rising representation of women in management, female managers continue to be devalued compared to male managers, presenting a challenge for gender inequality in organizations. This study helps address a significant gap in the literature by investigating if the devaluation of female managers can be explained by their lower effectiveness in motivating worker performance. We investigate this question by using a methodological framework that combines unique personnel records, ethnographic and field-experimental data in the context of a large Indian garment factory where female supervisors are devalued and paid 15% less than their male counterparts to manage a female workforce.

First, we demonstrate that the devaluation of female supervisors cannot be explained by their lower managerial effectiveness. By exploiting within-worker changes in supervisor gender in the personnel data, we find that female supervisors elicit 5% higher worker performance than male supervisors. Second, we ethnographically and experimentally show that female supervisors outperform their male counterparts by adopting a "non-authoritative managerial style," and further suggest that this style could lead to devaluation by upper management. Combined, these results rule out managerial substance as an explanation for the devaluation of female managers, pointing instead to managerial style as a prime determinant of gender inequality in the workplace.
Alone at Home: Post-9/11 Military Veterans and American Housing and Homelessness Policy

The social safety net available to veterans is far more robust than for civilians in the United States, however, veterans are still more likely to experience homelessness than their peers. As the number of veterans from the wars in Afghanistan and Iraq continues to increase, it is essential that planners consider whether the housing and homelessness policies designed for past generations meet the needs of today’s veterans. This is especially true as today’s veterans are more likely to be women, are experiencing more deployments, and are frequently coming from communities and families with limited resources. Historically, policy-makers have provided veterans a range of social benefits, including federally subsidized housing. For example, many public housing projects were originally built for WWII veterans. In addition, since the passage of the Servicemen’s Bill of Rights of 1944, veterans have had access to Department of Veterans’ Affairs (VA) home loans. In more recent decades, the VA has funded several programs for homeless and at-risk veterans.

Using the Pioneer Valley of western Massachusetts as a case study, I explore the experiences of post-9/11 veterans and the role of housing during the transition from the military to civilian life. Based on data collected through interviews with veterans and service providers, original survey data, observation of meetings, and analysis of administrative data, I outline the ways in which housing choices and policies contribute to the isolation of veterans from civilians in higher education settings, transitional housing, and in community settings. I argue that current housing policies do not address the social and physical isolation that returning veterans experience and, in some instances, these policies increase the isolation experienced by veterans. In addition, to experiencing isolation from the civilian community, many veterans, especially women veterans, experience isolation from the veteran community. Engagement with veteran service organizations and employment in veteran services helps to reduce this isolation and provides a sense of purpose to both male and female veterans. Finally, I argue for a community lens when considering veteran readjustment, as the resources available to veterans is tied to both their geographic location and social networks.
This paper uses a mixed methods approach to investigate the extent of gentrification in Providence neighborhoods, in order to contribute to policy-relevant research on gentrification in weak market contexts and in Providence, specifically. While Providence has not been the subject of many investigations on the subject of gentrification, this paper finds evidence of gentrification in Providence, which is of a more limited extent and pace than that which has been documented in strong market cities.

Additionally, this paper conducts a qualitative analysis of the revitalization rationales that underlie community development work in Providence, and finds that within Providence’s weak market conditions, current revitalization activities have not actively sought to manage displacement risks.

Finally, this paper finds that anticipated economic growth could catalyze a rapid increase in gentrification and displacement pressures which practitioners are not currently prepared to manage. Based in these findings, this paper recommends that Providence practitioners undertake to create a pro-active, context-specific ‘development without displacement’ strategy to preemptively manage neighborhood change in Providence.
Do School-Going Children with More Active Modes of Morning Commutes Walk More Throughout the Day?

Boosting physical activity in school-going children has multiple health and educational benefits. One strategy to boost physical activity is to have students adopt more active commutes. However, empirical health studies suggest that students respond to physical activity interventions by cutting down their activity throughout the rest of the day. If such compensatory behavior occurs in response to commuting-based physical activity initiatives, then these initiatives may not achieve their desired outcomes.

Using a dataset of walking data logged by about 7,700 Singaporean students wearing portable sensors, I examine the question: Do students who walk or take public transport to school walk more throughout the day than their peers who are driven to school, or do they compensate for more active morning commutes by walking less for rest of the day?

This study uses three statistical approaches to identify the relationship between morning commute mode choice and walking activity: a linear regression model that includes potential confounders like students’ age group, household socio-economic status, and built environment characteristics around home and school; a propensity score covariate adjustment model using similar baseline covariates as the first analysis; and a fixed effects model that estimates the net impact of inter-day mode changes for each individual student. Results from all three analyses suggest that students who take public transport or walk to school log a statistically significant and substantial number of steps more than their counterparts who are driven to school. However, this positive difference is whittled away by the end of the day, which supports the hypothesis that students with more active commutes compensate by walking less throughout the day. Programs to encourage active commuting may thus have limited effectiveness in boosting students’ physical activity.
Women, the City, and Spatial Citizenship: Examining Identity Formation and Employment Amongst Afro-Brazilian Women in Rio de Janeiro and Belo Horizonte

This thesis explores the way that experiences of citizenship are specifically shaped at the city level in urbanized environments. The way that people navigate the city is often contingent upon varying degrees of access and justice in different areas of life activity. I argue that access to citizenship is as much an economic endeavor as it is a civic endeavor. With public space as the realm of social interaction and exchange, this research illustrates how citizenship, belonging, and identification is formed in the city space and is reflected in employment outcomes for Afro-Brazilian women. Using the definition of spatial citizenship as the space in a modern city where “different citizens negotiate the terms of their interactions and socialize despite their differences and inequalities,” (Caldeira, 303) I address how a public negotiation of spatial citizenship does not always stop in the public realm, but continues into more discreet sites of activity and social engagement.
Anthony Vanky  
Dissertation Advisor: Dennis Frenchman

To and Fro: Digital Data-Driven Analyses of Pedestrian Mobility in Urban Spaces

Understanding how environmental attributes can influence the behavior of pedestrians is of concern for public health officials, transportation engineers, and urban planners. To what degree, if any, do these various environmental characteristics influence how much and for how long people walk? To answer these questions, this thesis analyzes large-scale spatio-temporal pedestrian activity records collected from the users of a mobile phone application in Greater Boston, Massachusetts and the San Francisco Bay Area, California. The dataset contains the locative traces of recreational and utilitarian pedestrian walking activities which include the GPS and temporal records of individuals. In sum, this dissertation considers over 2.2 million trips from 135,000 people.

This thesis addresses the topic in three parts. The first study examines the impacts of climate and environment on active transportation trips, and finds varying effects of different types of weather. However, these associated effects are influenced by a trip’s purpose, as well as by season and location.

The second study analyzes the impact of built environment characteristics on walking activities at the urban scale. These characteristics are generally defined as components of the density, diversity, and design of urban spaces. The study finds that activity characteristics are moderated by the features of location, and that infrastructure for walking, transportation access, and destinations have a positive influence on walking volume. Walking durations are largely invariant to these factors. The third study explores the effects of urban attributes on the aggregated route choices of individuals through the use of revealed preferences. The study’s findings suggest that pedestrians are sensitive to the presence of retail destinations and transit availability in their choice of path. Despite this, architectural and street-level design features have mixed effects.

These analyses contribute a new approach to understanding the interrelationships between the built environment and pedestrian activity, and how those effects contribute to the walkability of communities. This thesis also tests the usefulness of passive, pervasive mobile devices in evaluating urban space, and considers their potential to aid in the development of human-centered urban design—from an analysis of the quantified self toward the understanding of the quantified community.
There are only three countries in this world comprised only of atoll islands, Kiribati, Marshall Islands and Tuvalu. These atoll islands, only 2 or 3 meters above seal level, have had structural disadvantages of geographical and physical nature that have hindered their socioeconomic development throughout history. While atoll islands have been inherently vulnerable due to their unique topography, the impacts of anthropogenic climate change are already threatening their capability to be inhabitable. According to IPCC predictions, sea level rise will ultimately lead to the disappearance of these islands in the next 100 years. Current climate adaptation finance responds to such alarming situation with conventional interventions, such as seawalls, which are not only detrimental to this unique ecosystem but expensive and lengthy investments. The available adaptation finance architecture fails to adequately adapt its conditions for atoll islands.

My thesis argues that planned resettlement should be included and financed as an adaptation strategy. It provides a stylistic model comparing traditional hard infrastructure adaptation projects and planned resettlement through five different dimensions: financial costs, transactional costs, opportunity costs, adaptability and level of ownership of costs.
Automobile Regulations in China Examined from a Behavioral Perspective

Automobile growth has created severe problems such as traffic congestion, air pollution, and carbon emission worldwide. To address these problems, Chinese local governments implemented a series of automobile regulations to slow down auto growth. They set up a yearly quota of license plates and they require potential car buyers to obtain a license plate before buying an automobile. Local governments end up with three modes of allocating the scarce license plates: only lotteries, only auctions, and a mix of lotteries and auctions. The main debate is the tradeoff between the efficiency represented by auctions and the equity represented by lotteries. By drawing on two survey results in Beijing and Guangzhou, this thesis analyzes the automobile regulations with respect to the normative aspect, the empirical aspect and the behavioral aspect of the debate. I structure this thesis in three essays.

The first essay focuses on the normative aspect. It provides different ways of interpreting fairness, which is a guiding principle of the lottery-based allocation scheme adopted in Beijing.

I build up a three-layer framework to evaluate the fairness of the lottery-based allocation scheme. I conclude that the lottery is superficially fair because it only narrowly conforms to the equality rule.

The second essay focuses on the empirical aspect. It analyzes how people chose between lotteries, auctions, and non-participation in Guangzhou, where a mixed mode of lotteries and auctions is adopted. I focus on the marginal effects of socio-demographics, especially income, on choice. It turns out that high-income people chose both lotteries and auctions, in contrast to the common belief that lotteries benefited the poor and auctions benefitted the rich. In fact, people responded strongly to the fluctuation of the number of participants and winning rates of lotteries and auctions.

The third essay focuses on the in-depth behavioral aspect. I analyze the impact of risk biases on the choice between lotteries, auctions and non-participation under three different policy scenarios. Consistent with theories, people over-estimated the winning rates of lotteries and under-estimated the winning rates of auctions. When faced with a choice between only lotteries and non-participation or between only auctions and non-participation, the risk biases dominated the decision-making process. On the contrary, the cognitive biases did not influence decisions much if people were faced with lotteries, auctions, and non-participation, as in the Guangzhou case.
At the close of 2016, the United States finds itself deeply fractured, caught between clinging to a nostalgic past and pushing for progressive possibility. As we stand divided, a set of emerging great challenges threaten to rapidly change the world as we know. At such a juncture, I argue that the practice of imagination can help us to break out of habitual thinking and routine practice to see our challenges, and ourselves within them, more fully and clearly. By imagining alternative futures, and communicating them to a broader audience through fiction, I propose we may better understand, collectively, how to enact our agency in the present to address these challenges head-on.
Exploring Urban Activity Patterns Using Electric Smart Meter Data

This thesis uses electricity consumption data from household and enterprise-level smart meters in County B, Country A, and Turin, Italy, to explore temporal and geographic variations in urban energy consumption and thus urban activity. A central question is whether electricity consumption patterns vary between different economic sectors, across space, and between different days of the week and times of year. This data shows clearly that Country A activity patterns are roughly similar across all seven days of the week, whereas Italian electricity consumption declines markedly on weekends, particularly Sundays. In general, and particularly in Italy, this thesis shows strong seasonality to electricity consumption, with clearly identifiable seasons and high correlation in consumption patterns within each season. This thesis focuses on user type variation in Country A, where although certain patterns are more widespread in some sectors than others, there is significant overlap between pairs of sectors. Hence this thesis is able only to classify land use between residential and industrial sectors, and is unable to classify land use to a meaningful degree of accuracy by analyzing electricity consumption. It is, however, possible to detect geographic variation: urban and industrial centers consume a higher percentage of their electricity on weekdays and during regular work hours than rural areas. In addition, the impact of various special occurrences on urban behavior is probed. This thesis provides measurement of the impact of various holidays on economic activity, using electricity consumption as a proxy. Large (industrial) consumers are generally much more sensitive to holidays than small (residential) consumers are, except during the summer months in Italy. In general, consumption declines on a single holiday are highly correlated with consumption declines on other holidays. Furthermore, using observations at 15-minute intervals, I attempt to measure the short-term behavior shifts caused by daylight savings time’s start and finish.
Land acquisition is the primary policy tool used by Chinese local governments to meet land demand for urban expansion and economic development in China. My thesis focuses on the compensation implementation of a land acquisition case in a fourth-tier city, demonstrating the evolution of land acquisition compensation and the interplay among farmers, real estate developers, and local governments.

Cash and in-kind compensation (a resettlement apartment) make up “monetary” compensation. “Non-Monetary” compensation includes social security, education resource, everyday budget know-how, and other factors that can help farmers smoothly transition from rural to urban living. This thesis evaluates the monetary and non-monetary compensation in terms of value, distribution and other factors. The findings indicate that the monetary land acquisition compensation in the selected case is higher than regional standards. However, there is ambiguity in both the monetary compensation value and distribution.

When the analysis of the case study goes deeper, I gradually realized the importance of non-monetary compensation. As for the non-monetary compensation, taking the perspective of relocated farmers, this thesis demonstrates that relocated villagers are still subject to various uncertainties in their lack of social security, of appropriate skills to participate in the urban labor market, of education resources, and of everyday budget know-how. On the basis of this case study, I suggest that to deal with the problems in land acquisition, Chinese local governments should allow landless farmers to participate in compensation scheme design, and provide a more comprehensive compensation package to help farmers transition to urban life. In addition, I also provide land a readjustment method as a possible alternative for the government to apply when conducting land takings.

This dissertation is a collection of three essays on urbanization and migration. The first essay is a treatment on the urbanization theory. I discuss the ambiguity in the urban concept, and propose a comprehensive urban concept which includes the demographic, physical, economic, social, and cultural dimensions of urban characteristics. Based on the concept, and through analyses of the countries’ preference over specific urban definition methods, I propose the Kuznets Curve for urban definition complexity, and the Hypothesis of the Unbalanced Urbanization Process. I test the hypothesis with a case study of five countries: the United States, Mexico, China, India, and Ethiopia. With the findings I call for a paradigm shift in the study of the urbanization process, which constitutes the general framing of the dissertation.

The next two essays concern the application of the framework in a specific country — China, and relevant studies on the country’s internal migration. The studies are based on two nation-wide, large-sample surveys on the migrants and rural households’ living conditions in 2008 – 2009 (n = 2398) and 2014 – 2015 (n = 2097). In the second essay, I study the life-cycle migration behavior pattern of China’s internal rural-urban migrants. I first conduct a statistical treatment of the general demographics as well as individual-level migration-related behavioral patterns of the migrants, and then reconstruct the life history of the migrants through survival analyses on their migrating and return migrating behaviors, and also two Cox proportional hazard models respective to the two survival processes which examine the determinants of such behaviors. Results give rise to an overlapping generational and iterative pattern of the migrants’ migration behavior with a filtration mechanism, which I call “the Circle of Life” model. Lastly, in the third essay, I examine the role of China’s institutional environment in shaping the unique migration behavior pattern. I conduct a thorough documentation on the evolution, and especially the recent development of China’s Hukou (household registration) and land ownership policies, and show the shift of a dual social structure as a result of the policy change. Furthermore, I develop two groups of discrete choice models to examine the formation of the migrants’ urban settlement intentions. I conclude that China’s institutions have played an empowering function, thus giving rise to an institution-bound rational choice behavior concerning migration and settlement. Lastly, I briefly discuss the implications of the findings on urbanization and development theories, as well as the policy suggestions.