CONCEPTUALIZING RACIALIZED REGIONAL DYNAMICS

by

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ABSTRACT

People of color in the United States have historically been forcibly moved or removed through various formal and informal institutional policies and practices. Policies and practices of racial exclusion favoring white populations have had long term and continuing impacts on where people reside. In this, thesis I develop a framework for interpreting white dominance in metropolitan regions by examining place-based population change in the context of racialized processes. Using the Cincinnati Metropolitan area from 1970 to 2010 as a case study, I show how a region experiencing population decline exhibits racialized patterns of growth. This framework improves our understanding of how place-based practices affect dynamics of racialized population change in a larger region by incorporating time, place-based practices, and spatial relationships. The regional lens highlights how scholars can view complex regional systems as both rooted in place and informed by larger social-racial dynamics. Building from theoretical foundations in urban sociology and empirical findings on racial exclusion, the new framework elucidates how metropolitan regions are shaped by racialized social contexts through intra-regional dynamics.

<u>Introduction</u>

This thesis examines a conceptual framework of racialized metropolitan regional growth. I use the Cincinnati Metropolitan area from 1970 to 2010 as a case study for this framework to examine how a region experiencing population decline changes over time and shows racialized patterns of heterogeneity. This framework creates space for understanding how place-based practices affect dynamics of racialized population change in a larger region and conversely how and when regional spatial and material patterns affect sub-regional places such as counties.

We can imagine a model for understanding metropolitan regional population change usually includes labor markets, dominant industries, housing, and time (Covington, 2018; Fernandez & Su, 2004; Fowler, Rhubart, & Jensen, 2016). I describe an expanded, nuanced model, acknowledging that there are unique racialized place-based processes and historic trajectories connected to a regional system. The conceptual frame developed in this thesis will reinforce work done by sociologists focused on understanding racial diversity or exclusion. Specifically, this opens a space for understanding how the unexpected diversity outcomes at place-level relate to regional population processes. This thesis suggests that heterogeneity of places within a region can be understood from the perspective of spatial relationships within region as well as from their particular historical practices of racial exclusion along with other local characteristics (Benner & Pastor, 2015b, 2016; Curtis,

Lee, O'Connell, & Zhu, 2019; Loewen, 2005; Molotch, Freudenburg, & Paulsen, 2000; O'Connell, 2019; Paulsen, 2004).

This thesis extends the rising work and attention on the legacies of redlining and other racist and white supremacist processes; this work also sheds light on the place based nuance of long-term consequences of racial inequality (Berry, 2008; Coates, 2014; Crowe, 2012; D. S. Massey & Denton, 1998; Ray, 2019). Identifying patterns, population change, spatial context, and places with unexpected trajectories will inform theoretical implications for how we conceptualize population change in place. I focus on recognizable units of measure, historical context, and spatial characteristics as meaningful and recognizable symbols for policymakers and advocates.

Identifying the place-based characteristics within in a region will highlight locations that researchers can investigate in order to develop ways of understanding the subtle characteristics of place, local practice, and historical context. These characteristics cannot be captured adequately by regional, population level work. The iterative process will generate and strengthen our conceptualization of region, place specific population growth, and racial exclusion. This is particularly important in the context of understanding the changing boundaries and definitions of urbanity, rurality, place, and changing racial populations and dynamics across region (Garner, 2017; Lichter & Ziliak, 2017; Lobao, 2004). This approach to identifying social processes using aggregate data, carefully conceptualized drawing on previous empirical work, is intended to serve as a conceptual frame for future research that aims to understand population growth and diversity in urban regions.

My conceptual framework, what I call *racialized regional dynamics,* allows for place-based characteristics to come to the forefront of analysis rather than sidelining them as statistical nuisance and unexplainable force. Conceptualizing population composition in regions as dynamic, interrelated, and entrenched in historical practices allows for an analysis that can prioritize the investigation of legacy effects and the impacts of adaptation or maintenance of practices that result in racial exclusion at the sub-regional level. Through analyzing county-level data one can identify significant exceptions and the theoretical implications for how we understand regional population systems.

This project investigates how population change relates to spatial relationships between places and with respect to built but historically evolving contexts of highways and housing. I use the Cincinnati Metropolitan region as a case study. The region has characteristics common to midsized American cities such as a history of white flight, a declining core, and a social context where racial categories are salient and impact the lives of residents. I argue that place-based, spatial, and material contexts are vital to understanding regional populations because these contexts create nuanced trajectories for counties within a metropolitan region. The findings of this research also create a clearer path and agenda for policymakers and leaders to include historically informed, place-based contexts in their decision-making. For example, the processes of gentrification and suburbanization may be concurrent across a region but may occur in fundamentally different communities and for distinct reasons. To address this, I conceptualize a holistic picture of a region and the unique places within a region to inform the broader and long-term impact of public and private influences.

Racialized Metropolitan Regions: Rooted in Place, Shaped by Race

The American landscape has been shaped by racialized processes (George Lipsitz, 2011; Loewen, 2005; D. S. Massey & Denton, 1998). As scholars, we must work to ensure that these implicitly racialized processes are explicitly incorporated into our contemporary analyses of population change, composition, and distribution. By building from the theoretical foundations of urban sociology and empirical findings on the impacts of racial exclusion, I conceptualize metropolitan regions as dynamic systems with place-based processes and meaningful historical developments that leave a legacy on subsequent development, all of which are bound by the built environment, or material contexts, of neighboring places. Below, I examine the relevant literature on urban systems as regions, and place-based perspectives, to argue that racialized processes, such as exclusion, impact how regions and sub-regional places change over time and in relation to each other and to the region as a whole. Through this approach I develop connections to show the implication of the development of a complex conceptualization of regional population as part of a racialized social world.

By incorporating complexity with an emphasis on the racialized power dynamics of the United States, we can begin to understand the population dynamics in a region informed by place-based processes in the context of a racialized society. The sociological literature has approached racialized processes and patterns of growth in many different ways, including considering the dynamics across a region (Benner & Pastor, 2016; Johnson, Curtis, & Egan-Robertson, 2017; Lichter, Parisi, & Taquino, 2015; Lobao, 2004;

D. Massey, 1994), place-based experience, character and memory (Alkon & Traugot, 2008; Dreier, Mollenkopf, & Swanstrom, 2014; Foote, 2003; Garner, 2017; Hayden, 1997; Lichter et al., 2015; Molotch et al., 2000; Neely & Samura, 2011; Salamon, 2003), racial inequalities (D. S. Massey & Denton, 1998; Norgaard, Reed, & Van Horn, 2011; Sharkey, 2013; Stewart, 2008), segregation (Lichter et al., 2015; D. S. Massey & Denton, 1988; Quillian, 2012), exclusion (Linz, 2017; G. Lipsitz, 2007; Loewen, 2009), and how to analyze racialized place processes (G. Lipsitz, 2007; Neely & Samura, 2011). This study builds on previous work to develop a unified conceptualization of how racialized population dynamics occur in a region. With this framework, researchers can build a richer understanding of how these place-based dynamics impact a regional system and generate racialized population patterns that characterize our country.

We can increase our capacity to identify a variety of experience and complexity of place-based systems by carefully attending to the range of place-types in a region and their connectedness. The social-historical context emplaces this work within bounded social spheres (D. Massey, 1994). A place-based, historically informed approach allows me to investigate two central research questions. First, what are the county-level patterns of population change in this region? Second, how do spatial and historical contexts relate to patterns of population change, white population change in particular?

Sociologists and urban scholars must connect regional conceptualizations of urban population processes with how racialized place-based processes affect local-level development. This requires bridging the concepts of place-based process, scale of

processes, and urban regional systems. Yet, we do not clearly understand the long-view and large-scale influence of place-based racialized systems in relation to each other within a region. Segregation, for example, is studied in local terms with the emphasis on social outcomes such as inequality, not on the regional population dynamics. While these processes are pernicious, they are unevenly distributed in a region because of the distinct place-level trajectories, attributes, and processes. Racialized dynamics and uneven distribution of power informs how place-based processes occur; furthermore, these dynamics react and interact across and within places in a region.

Regional Approaches

In order to understand place-based processes in context, we must consider the region. The variation of resources, influence, and infrastructure within a region can lead to stagnation, uneven growth, or exacerbate inequality at the local and regional level. Benner and Pastor (2015) analyze metropolitan regional processes by investigating how equity and growth are facilitated in a regional context. Successful promotion of equity and growth are shaped by leadership that shares a common understanding, or vocabulary, across the variety of locales within the region and across identities. They call this ability to meaningfully communicate a shared, regional epistemology. The common frame of knowledge creates social environments where decision making can be beneficial to all groups *and* successfully implemented (Benner and Pastor 2016).

Benner and Pastor's approach is valuable in creating a framework for understanding other regional changes which may also be contingent upon shared or

disparate knowledge among sub-regional communities. Taking this complexity into account supports an analysis of a dynamic, heterogenous region. I take Benner and Pastor's framework and extend this to my thesis that sub-regional places make unique contributions as either resistance or acceleration to regional change. These dynamics, as Benner and Pastor find, affect equity and growth. I focus on residential patterns in a region to understand how places may be shaped by racialized processes of exclusion including segregation, suburbanization, gentrification.

Lobao's rural regional framework suggests focusing on inequality in rural regions by using middle range spatial units, such as counties. The focus on this spatial scale contributes to our understanding of how place and development are conceptualized by decentering the urban (Lobao, 2004). An important take-away from her framework is that by drawing focus away from the urban, researchers can focus on ordinary settings and create a balanced view of development not only of exceptional places such as quintessential urban growth, but also to include inertia and localization of regional processes(Lobao, 2004, p. 6)(Lobao, 2004, p. 6). Lobao asserts, "[f]ocusing on exceptional places and missing traditional regions has contributed to an over- emphasis of change, as opposed to inertia, and globalization over localization in regional processes" (Lobao, 2004, p. 6). This thesis focuses on the rural-urban continuum within a metropolitan region by explicitly considering county population, which is associated with rurality and urbanity. Further, it takes into serious consideration the power of "ordinary settings in which people live and work" in a regional context (Lobao, 2004, p. 6). I add the vital component of racialized distribution of power and place-based practices and how, as Lobao might say,

these localized practices result in inertia (2004, pp. 6–7, 14). In this thesis, I consider the inertia of racialized processes of exclusion.

Rooted in Place: Local Contexts Shape Place

While regions are an important context for sub-regional places, regions are also influenced by various interconnected, place-based population processes. Places are locked into their physical locations, and though the population may change, the place's history, institutions, and the artifacts of its past remain. The question then is what occurs in place that shapes how places develop over time? Places change in meaning, resources, social and political context, and in relation to other locales over time. Sub-regional places in a metropolitan area may be experienced both as urban and rural (Garner, 2017). These contexts at the place-level further demonstrate the relationship between place and region; a sub-regional place can have social practices between newcomers and long-time residents, perceptions, and policy responses to urbanity or rurality, all of which shape development and population change (Salamon, 2003). While social contexts can be defined as relationships to job markets, social connections, resources, local governance, social networks, and civic life, other social factors such as racialized practices of exclusion influence the composition and identity of a place. With this in mind, we can see the complexity that develops in a region composed of many sub-regional places.

Racial Exclusion Within Regions

Research on diversity across the rural-urban continuum, suggests that the transformation of the racial composition of communities is increasingly universally

observed. Lee and Sharp find that racial diversity "should no longer be considered an exclusive property of metropolitan America" (2017, p. 42). This is a valuable step towards building a case for understanding race in regional contexts. They found that the rural racial-ethnic context can no longer be defined as a contrast to urban racial contexts; though, by referring to Wirth (1938), they indicate that the population size of a place is related to diversity, with larger places having more diversity (Lee & Sharp, 2017, p. 43). In exploring rural segregation and exposure to diversity, Lichter et. al (2018) find that population growth in relation to people of color may be underlying some of their optimistic findings of increased diversity. They comment that white population growth is occurring in places that are less diverse (more white) and populations of color are growing in places that are more diverse (less white) (Lichter, Parisi, & Taquino, 2018). Earlier work showed that segregation was occurring at the macro, suburban level(Lichter et al., 2015).Together, these examinations of demographic change indicate important heterogeneity across place types and larger segments of the country (Lichter et al., 2018, pp. 715, 716).

The research on segregation and diversity across various scales demonstrates that there is uneven distribution of populations across space, and they indicate that focusing solely on the core cities does not suffice for understanding racialized population change. Although the rural-urban interface is blurring the regional boundaries and interpretation of where racial composition is changing (Lee & Sharp, 2017), based on this work, we can still expect some general patterns in counties in a metropolitan region based on characteristics

such as population size. Specifically, we could expect that larger populations would grow faster and be more diverse (Fowler, Lee, & Matthews, 2016).

As populations grow unevenly, understanding the role of racist, exclusionary practices in housing and property will inform how we examine the current state and future possibilities of development. Racially exclusionary practices occur in a variety of ways, both covert and overt, typically led by white individuals or white institutions. This thesis engages with how place-based processes are affected by practices of racial exclusion of people color which results in places with overwhelmingly white populations. Thus, my focus is on places that have overwhelmingly large white populations, not the process of exclusion itself but the result of exclusion. There is a rich literature examining the legacies of overt exclusion by race. For instance, James Loewen examines sundown towns or white towns that explicitly excluded Black people through formal and informal practices such as policing, housing covenants, intimidation, and publicly posted signs (Loewen, 2005). This specific practice was not as prominent in the South as it was in the Midwest and Northeast (p.70). Sundown towns, as Loewen writes, are "Hidden in Plain View" (Loewen, 2005, p. 192). They are both ubiquitous throughout the United States and difficult to identify formed through various means, policies, and practices that are forgotten or ignored today. The outcomes are mostly-white places and institutions developed during an era of overt exclusion, which, by nature of being exclusionary, generates a lack of connections and pathways extended to people of color (See also: Ray, 2019).

Recent scholarship has built on Loewen's work and found the long-term impacts of racial exclusion are also evident in contemporary economic development and racial

inequality. Former sundown towns impact long-term local development strategies such as industrial recruitment, self-development, or providing incentives (Crowe, 2012). In addition, outcomes on Black-White inequality are also different across sundown and non-sundown towns, with former sundown towns exhibiting more inequality over time (O'Connell, 2019).

The research on sundown towns points to a clear long-term impact on place-characteristics shaped by exclusionary practices. Considering that place-specific characteristics have such impact on the trajectories of places, we are left with the possibility that practices of residential exclusion will vary from place to place and even within regions. The research developed so far shows that the long-term symptoms of racial exclusion are manifest as inequality, segregation, and depressed economic development (Crowe, 2012; Curtis & O'Connell, 2017; Loewen, 2005; D. S. Massey, 2016; O'Connell, 2019; Sutton, 2018).

Exclusion is most clearly seen in various forms of residential segregation, whether at the neighborhood level or as a sundown town. Nevertheless, segregation and exclusion occur differently both in degree and nature based on local contexts. The most visible example in the United States is the paradoxical context in the South. While perceived as less racially progressive, the Southeastern U.S. has less segregation when measured through traditional methods such as the dissimilarity index. However, as Grigoryeva and Reuf (2015) suggest, the use of proximity as a measure of social integration cannot capture some of the fine-grain processes that may be occurring "street front." This tertiary segregation in practice leads to distinct social contact and access, yet it is not driven by the

distance of residences but rather by the application of spatial and social boundaries (Grigoryeva & Ruef, 2015). Micro-segregation is an example of how at the street and building level segregation can occur and have a relevant social impact (Grigoryeva & Ruef, 2015). We can extend this logic to conclude the possibility for other scales of segregation, for example, county, state, and regional legal and economic practices (see, for example, Fernandez and Su 2004; Lichter et al. 2015).

While we know that segregation can occur at different scales and through distinct processes, measuring segregation is complex and relies on conceptual decisions and definitions, and there are methodological limits to how we describe and measure segregation. For example, limitations of the dissimilarity index include that it measures segregation as "evenly distributed", not does not engage with the implications of being isolated from community, and the scales of measurement may capture residential segregation but not social interactions (Bonilla-Silva & Zuberi, 2008; see especially Horton and Sykes, Berry 2008). If the objective in measuring "diversity" in a region is to identify what percent of a population is made up of people of color, for example, we are measuring how much white people are exposed to people of color, not necessarily whether there is equity of experience (Abascal & Baldassarri, 2015). Reardon, et. al developed a segregation profile to describe a scale-sensitive measure of metropolitan segregation. They add an important spatial perspective on how micro and macro segregation relate to each other. This important contribution further highlights the importance of understanding how

settlement patterns in a metropolitan region can be identified and interpreted by location, scale, physical geography, and material/economic contexts (Reardon et al., 2008, p. 509).

Building a Comprehensive Framework: Regions Interconnected, Shaped by Racialized Processes

It is important to conceptualize the uneven nature of urban processes as complex, dynamic, deeply ingrained over time and in place. In any locale, a general trajectory—not just racialized but also more general social and institutional influences—has been established by past processes such as which institutions are established, by whom, what infrastructure developed, and their intended use (Alkon & Traugot, 2008; Molotch et al., 2000). These legacy effects can limit the possibilities of change by shaping institutions or even creating technical limitations or bias through written policies (N. K. Blomley, 2011). These legacy effects can occur overtly through the shaping of sundown town policies as discussed earlier, construction of property use laws, boundaries, and implementation of treaties (Norgaard et al., 2011), or more elusively impacting inequality through mundane practices such as the production of municipal code by engineers focused on flow-function over social use (N. Blomley, 2011). Thus while the idea of legacy effects of slavery and racism is increasingly part of how we conceptualize inequality, there are multiple points in the history of a *place* that shape and create a legacy, not only overt race relations but also

of how the physical environment is shaped and bureaucratic structures of local policy are limited.

Conceptualizing a region as composed of multiple places with intra-region relationships and racialized legacy effects allows for a nuanced reading of population change and identification of the distinct characteristics of exceptional cases of both change and resistance to change. While the research on race and place demonstrates long-term legacies, we can also see that place-based historical processes of racial exclusion can have long term impacts on local development and inequality patterns. Reconceptualizing these processes as place-based in the context of regions will help identify patterns of growth consistent with racially motivated practices of exclusion and how these relate to the dynamics of population change.

Learning from the research on race, segregation, and place, we can come to understand that place-based processes are shaped by history, interconnected in a region and civic life, and influenced by public and private interests. The literature on urban processes and regions demonstrates that processes of exclusion, such as segregation and gentrification, occur within regions that as a whole are interdependent on shared knowledge and practice (Benner & Pastor, 2015a; Logan, 2013; D. S. Massey & Denton, 1998; Thompson, 2016). This means, that a regional system depends on and affects the many sub-regional places it contains. The dynamics of inclusion and equity in a region concurrently are informed and affected by these smaller places contained in the whole. Practices of exclusion based on race are implicitly and explicitly part of the literature on urban processes (e.g., race, exclusion, segregation). Meanwhile, sub-regional places vary

in population size, social connectivity, and spatial connectivity to the region as a whole. Thus, conceptualizing a region as a system with interconnected and racialized processes will facilitate a robust understanding of how urban populations move, change, and persist in place creating larger system of residential and segregation patterns.

We have learned from the literature to carefully consider the shifting scales of urban processes over time, specifically considering macro- and micro-segregation. In their national-level study of metropolitan segregation, Lichter et al. (2015, p. 846) noted, "Neighborhood residential segregation has been shaped and reshaped over the past several decades by place-specific demographic and economic processes." They found that, generally, between-place macro-segregation has increased while micro-segregation, within-place, has decreased(Lichter et al., 2015). Identifying within and between-place segregation opens us to also consider how the metropolitan region and the dynamics within it are shaped over time.

Sociologists have examined the multiple facets of race, place, and population. A natural next step is to conceptualize how a metropolitan region interfaces not just with each concept separately but as a complex system embedded in a heterogeneous regional landscape. Racial segregation has had a profound impact on American cities. Housing access is one piece of a larger puzzle of social systems that unevenly shapes people's lives. Access to social capital, community resources, and infrastructure impact the possibilities for mobility (Dreier et al., 2014; Sharkey & Faber, 2014; Swanstrom, Dreier, & Mollenkopf, 2002). Segregation also has impacts on environmental health quality, education, and access to employment (Billingham & Kimelberg, 2013; Elliott & Smiley,

2019; Fernandez & Su, 2004). The framework I am proposing, accepts that places are multifaceted, and that places' complexity can be seen in part through the development of distinct population trajectories and relationships across a region. This framework allows for emergent explanations, solutions, and questions about how these racialized processes occur—and perhaps how to best interrupt them.

The literature demonstrates the powerful impact of racial processes on residential patterns, the metropolitan or regional patterns of exclusion and inclusion through segregation, gentrification, and development, and the place-based processes and meanings. This thesis proposes a conceptual connection among these ideas and selects a region as an empirical case to examine population change within a social system through patterns of development, settlement, race, and exclusion.

Conceptual Frame: Racialized Regional Dynamics

Conceptualizing how regions function, particularly in relation to race is complimentary to other regional approaches that define the boundaries, characteristics, and patterns of change (Fowler, Lee, et al., 2016; Fowler, Rhubart, et al., 2016; Porter & Howell, 2012). This thesis does not explore diversity in a region, but instead examines what racial homogeneity means in a regional system where white power and history have shaped the landscape. While regional literature clearly has examined how much populations have changed, often the default white population and its power in shaping a region is taken for granted. My conceptual framework considers the impact of social

processes on how race changes occur within a metropolitan region and in the context of the built and social environment.

Complexity in Regions Informed by Space and Race

My conceptual framework, *racialized regional dynamics*, takes into account the inter-relationships among places within a region, the place attributes, and dynamics in historical context. In figure 1A, below, the gray box represents a region, the white circle with various characteristics represents place as a dynamic location within a regional context. Figure 1B represents my framework which also shows the multidimensionality of a region and the relationships among places within region. The three dimensions are time, characteristics of place, and relation to regional context. These place characteristics are each informed by racialized societal contexts at various scales in place, in region, and in the larger social sphere. These contexts can be material, such as built environment, topography, or geography. They can also be institutional, created by government policy and law. Or, such contexts can also be cultural, implicitly created or reinforced through daily practices informed by a racialized society. Place contexts are shaped by regional contexts and vice versa. While "Place A" nearest the viewer is seen clearly, the details and relationships further in the region are not immediately visible. These dynamic regional contexts thus require a deeper understanding of the relationships and patterns among places and understanding of the larger social forces shaping the region as a whole. Variation in practices across places, for example will distinctly impact places across the region.

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Figure 1A & 1B General Conceptualization of Region and Racialized Regional Dynamic
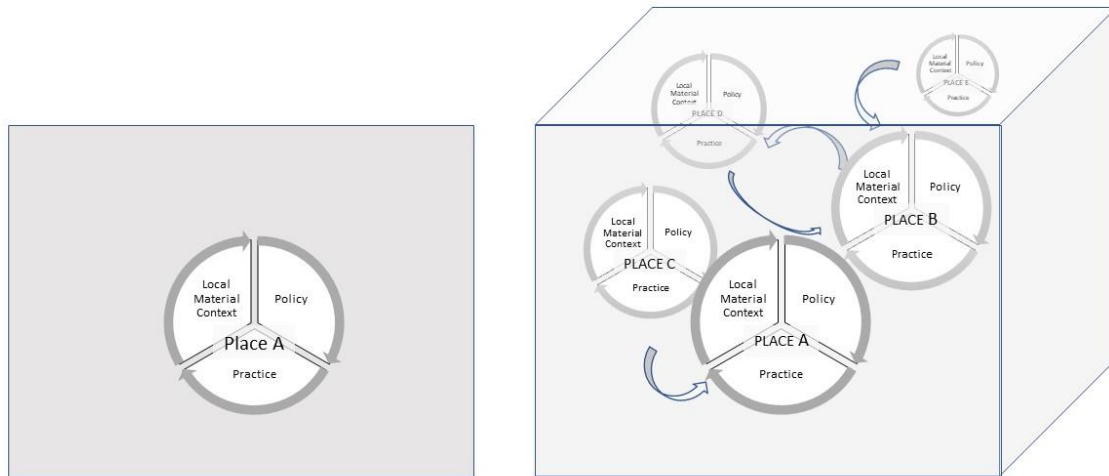
My interpretation of the region is that it is neither homogenous nor made up of distinct *independent* counties, rather, there is a more complex dynamic which occurs among places in a region. The exemplar that follows allows us to see how the separate parts of a region change in relation to each other over time, and also maintain internal heterogeneity. While the exemplar will show general trends of the region as a whole, it will also highlight counties with growth patterns distinct from the region and for their known characteristics. These seemingly anomalous cases allow for the framing of future research questions about the practices-in-place that affect housing, development, and population turnover. By examining this case, I expand on the contribution of a conceptual framework to understand regional, racialized population change.

Applying the Framework

The framework of *racialized regional dynamics* builds from empirical findings that racial exclusionary practices have shaped the distribution of people(Loewen, 2005; D. S. Massey & Denton, 1998). The framework also takes into account that racialized practices of exclusion have changed unevenly from place to place. The framework compels us to not look at monolithic regional policy decisions, but instead to assess where local, racialized processes create contexts that alter place-based population trajectories. We know how profoundly racial exclusion shapes populations in the United States at various scales, for example Southern segregation patterns at the street level(Grigoryeva & Ruef, 2015) and macro-segregation at the place and suburb-level(Lichter et al., 2015). Yet, we can also consider a hypothetical case where this framework would not apply; this would be a metropolitan region in a social context with no history of racial exclusion and without place-based variation of policy and practice. We would expect this region's various racialized populations to grow evenly in all counties, and not have dynamic relationships among places because of a lack of racial exclusionary practices. Such a case can only be hypothetical since empirical evidence shows that racialized exclusion has historically occurred and continues to occur in every corner of the United States(Crowder, Pais, & South, 2012; Lichter et al., 2018; Pais, 2017; Ray, 2019; Sharkey, 2008).

The framework presented here ensures a systematic acknowledgement of racial exclusion at the place-level, which is a powerful and dynamic component of metropolitan regions. Without the framework, we might attempt to understand racial differences in population change in terms of economic development. However, U.S. economic

development policies are shaped within a racialized society. Therefore, identifying places

with distinct local practices of racial exclusion allows us to critically examine where

practices of exclusion have long-term chronic impacts and/or where and when they have

shifted. Rather than looking for inequalities, which we have ample empirical evidence of

already, I assert that we need to investigate which processes are occurring or changing

among white-dominated places, institutions, or policies. My framework primes researchers

to ask different questions about how and why populations change within metropolitan

regions.

What are county level patterns of population change?

In order to answer the first question, "What are county level patterns of population

change?", counties are assessed as individual units then categorized by size. Examining

these counties by their size categories in aggregate is especially valuable considering

smaller populations. Population change is experienced differently by different population

sizes. For instance, change occurs differently based on the initial population size. Smaller

counties within a metropolitan region share characteristics that affect their material and

social capacity for growth such as having less infrastructure and fewer people. They are

typically further from the core, and these size groups have commonalities in location,

capacity for population growth, and resources. I use designated size categories based on

the local initial population sizes during the study period and analyze total populations,

population rate of change, and racial composition change.

How do county trends vary by spatial location and material contexts?

The second research question is about place-based characteristics, which are the material products of practices-in-place and spatial relationships among counties. Spatial contexts are analyzed based on access to transportation infrastructure—mainly highway access—and proximity to the metropolitan cores.

Together, these research questions allow for a rich description of the heterogeneity in place and over time to uncover distinct cases in terms of material contexts and deviation from the general population change patterns.

The Case: Cincinnati Metropolitan Region

This work originates from a question on how suburbs and areas within a metropolitan region change and react to major central city development, particularly because of the distinct cultural experiences within the region as the region straddles the North-South border. I often visited the Cincinnati metropolitan region between 2009 and 2015 and saw dramatic racialized changes in Downtown and the Over-the-Rhine (OTR) neighborhood. However, my hosts would clarify, I was visiting Northern Kentucky, not Cincinnati. I observed the important difference between these places through social interactions, even though they are in the same metro-region. After a year without visiting, in 2016, I found downtown and OTR were completely different places, and places my white hosts were now starting to visit after years of living in the region. There is something special about how people related to the various local areas within a metropolitan area, and the development of new parks and breweries in OTR changed things. The gentrification in

OTR has shifted the business and recreational activity of the neighborhood, which in turn is reshaping which people spend time and money, and access property in the area. For the purposes of this thesis, I expect this shift has affected the distribution of people and services available in the area. Areas around the region that catered to the OTRs new target population will lose residents and clients. Long-time residents and visitors to the area will find other locales to live, work, and socialize. Consequently, the larger region may experience a shift in its identity, from declining to bustling and growing, allocating funding and development for this space over others (Cohen, 2016; Dovey, 2017).

The Cincinnati Metropolitan Area was chosen in part because of its uniqueness on the boundary between North and South, topography, and local history. The site is a mid-size American metropolitan area, with its own regional and sub-regional meanings, dynamics, material contexts, and historical contexts. The distinct characteristics do not preclude the region from having commonalities with other places. Similar to other areas in the United States, the region experienced various phases of growth, shocks and shifts in response to adapting industries, financial shifts, highway development, a racialized social context, and suburbanization. This is just one region I could have used as an exemplar for expanding a conceptualization of regions as dynamic and affected by place-based practices of racial exclusion.

Overview of Cincinnati

Cincinnati Metro has a tristate population that includes distinct municipal, county, and state systems, cultural differences, and demographic changes. It is a valuable case

because of its core population decline and gentrification, and in the future will continue to be an interesting case as a recent spur of urban-core redevelopment begins to have larger-regional impact (Greenblatt, 2014; Linz, 2017; Stradling, 2003; Woodward, 2016).

Located in Hamilton County, Ohio, Cincinnati is nestled on the south-western border of the state on the Ohio River. While the study covers the period 1970 to 2010, the spark for this project came from the state of the region today. Most recently available estimates show the City of Cincinnati as having 302,940 people.[1] In 2019, the city's population was 50.3% White, 42.7% Black, 3.7% Hispanic or Latino in 2019[2] (U.S. Census Bureau, n.d.). The metro region is composed of 16 counties and has over 2 million people. As I explore in this thesis, the population changes in the region differ from the core city in important ways. While the most recently available data on the City of Cincinnati show a place experiencing modest growth, the story is more complex when we look at the region as a whole.

Geography and History of the Cincinnati Metropolitan Region

Cincinnati has grown into a tri-state region including Ohio, Indiana, and Kentucky. Much like any metropolitan region, there are many smaller municipalities which have remained autonomous communities, each maintaining its own identity and municipal

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[1] . Hamilton County, which contains Cincinnati in 2019 has 817,473 people up from 2010 population 802,374.

[2] For the remaining population: Asian alone, 2%, Native Hawaiian and other Pacific Islander alone 0.1%, Two or more races, 3.6%. Hispanic or Latino origin may be in any of the race categories; white non-Hispanic population is 48.2%. (U.S. Census Bureau 2019)

governance. The Ohio River separates Northern Kentucky from the rest of the region and serves as the core of Cincinnati. It provides not only an iconic view of the city, but the river sits on the historic boundary between the U.S. North and South.

Map 1 Cincinnati MSA Map with Highways[3]

The riverfront now serves as a commercial and recreational area and is home to parks, stadiums, entertainment, and museums. A recent addition to the riverfront is The Underground Railroad and Freedom Museum, which overlooks the river and emphasizes the city's role as a final stop between the North and South for people escaping Southern slavery during the Antebellum Period through the Civil War. Topographically, this is also

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[3] Google Maps, "Cinci MSA, Elisa Avila," 2020, https://www.google.com/maps/d/u/2/viewer?mid=1SQm_V6I68QpIsWERoqXMbXT5GxbHVLAP&ll=39.045704471603415%2C-84.59221964083376&z=8.

an important physical boundary because it limits movement across the states to several

bridges.

The municipalities outside of Cincinnati, especially in Northern Kentucky, have

long histories independent of the core city. These towns, across the river from Downtown

Cincinnati and included in the Census designation of the MSA, are older and maintain their

own state and local jurisdictions. Municipalities retain governance structures and

communities, and county level identities in Kentucky are also salient.[4] Thus, while seven

of the 16 counties in the MSA are in Kentucky, these counties have distinct historical and

place-based characteristics creating a variety of places within the metropolitan region. A

complex history of migration from the South, Germany, and Appalachia combined with

the transportation and highway development boom and consequent razing of communities,

housing discrimination, riverfront sports complexes, and racial tensions all contribute to

the current landscape of the Cincinnati Metro area we see today (Stradling 2003).

The city experienced many of the milestones of urban centers in the Midwest,

namely suburbanization and highway development during the latter half of the 20th

century. A pivot point for the city occurred in 2001 after a police officer shot and killed a

Black teenager, Timothy Thomas in the Over-the-Rhine (OTR) neighborhood. The events

that followed in and near OTR led to one of the largest riots experienced by the U.S. at that

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[4] License plates in the state include the county name on them, although most states do not include such specific place identifiers (e.g., Wisconsin, New York, Indiana). Georgia, Iowa, Kentucky, Tennessee, Mississippi include county names and Ohio includes a decal sticker with a county name or number. http://www.worldlicenseplates.com/usa/US_USAX.html and https://publicsafety.ohio.gov/static/bmv1515A.pdf

time. The riot began with protests downtown and then moved to the main police precinct which provoked a city-wide curfew and resulted in millions of dollars of property damage (Stradling 2003). In the years that followed a constellation of events reshaped and transformed this area and its racialized reputation as a "dangerous African American neighborhood" into a gentrifying area increasingly shaped to cater to the (white) creative class (Greenblatt, 2014; Linz, 2017; Smith, 2005; Woodward, 2016).

Local practices and decisions in the core county of the region, particularly the formation the Cincinnati Center City Development Corporation (3CDC), are important to the shaping of Cincinnati. 3CDC is a privately funded, non-profit corporation formed in 2003 by the mayor and members of the corporate community. The partnership has resulted in a major change of the urban core and subsequently the meaning of the core to residents throughout the region. Changes include sweeping purchases of property, development of public transportation, parks, redevelopment of cultural institutions, and development of new housing and businesses (Alter, 2014; Greenblatt, 2014; Liebing, 2015; Linz, 2017; Tweh, 2014; Woodward, 2016).

The places associated with the killing of Timothy Thomas, particularly Over-The-Rhine and parts of downtown are connected to a powerful and racialized moment. These places have been the focus of targeted re-development and re-branding ("ABOUT | 3CDC," n.d.; La Botz, 2008). However, these changes were not necessarily smooth nor

were they welcomed by all.[5] Organizations and individuals were aware of the

gentrification that would occur and were concerned (Woodward 2016). The changes

revealed "two worlds," and the target (white) audience outside of OTR were shown that

"…now 3CDC was bringing safety and rising property values to OTR" (Smith, 2005).

This white, core-centric view is important to the regional story. These changes at

the core changed the landscape of the entire region. The city and 3CDC have worked to

make drastic changes to the landscape through private and public decision making. These

city-core stories can be central to our perception and perspectives of city-based dynamics.

However, these dynamics also are part of the regional system of population change and

racialized experience. The dynamics in the core affect regional growth through allocation

of resources, displacement of people, and displacement of services. The fates of the

suburban and core areas are intertwined; the people living in, investing in, pushed out

from, or drawn into the core will impact the population dynamics in the whole region.

Analytical Approach

This thesis is applying the techniques and lessons learned from urban studies in

order to identify unique places' contexts of change and adaptation. I achieve this by

looking at population changes in county-level, administrative units. Counties are the

smallest, meaningful units of place that are *uniformly* present in a region. These places

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[5] People and non-profit service providers were now in the middle of a rapidly gentrifying place. 3CDC has worked with the city to develop these downtown spaces and has been careful to show inclusion and care in mitigating the displacement of local services (Liebing, 2015; Petracco, 2014; Tweh, 2014).

cover the whole area of a region, unlike villages or towns which do not include

unincorporated areas. Thus, the range of experience within a region is captured by using

the county as a unit of place. The counties selected were part of the Cincinnati MSA

between 1970 and 2010, however designations as "urban" have changed during this period,

indeed this is why I focus the thesis on place-based processes. In Indiana, two counties'

classifications changed, one acquiring metro status, the other losing metro status (Franklin

and Union Counties, respectively).

I analyze and compare total populations over time and across counties to uncover

growth patterns. To identify changes in population, I calculated rates of change for each

decade available and for the whole period. I compiled census data into time-series by

National Historic GIS (NHGIS) to access decennial information related to the total

population and to calculate what proportion of the population is white (Manson, Schroeder,

Van Riper, & Ruggles, 2019).

Decisions on Race

To understand population change over time and in relation to racialized practices

and processes, this thesis uses proportions of total populations that are white. Special

consideration was taken in determining white as the reference category for racial change.

The dominant racial group in the region is white and thus, the acceptance or resistance to

change of exclusionary practices would be seen in how dominant the population remains as

a share of the total population and through the impact of historically white-dominated

institutions. In this case, the long-standing dominance of white populations before the

study period plus the clear concentration of non-white populations in the core-county suggest that, indeed, changes in the proportion of a county that are white may indicate shifts in historical practices that made these counties either unattractive or unwelcoming to people of color. We may find legacy effects from these divergent social and political histories that in some cases may show an enduring presence—or resistance—to change and new populations (Crowe, 2012; O'Connell, 2019; Reece & O'Connell, 2016). Though some literature rightly critiques the use of white as the default category and focus of analysis, in this case, the analysis is about the entrenchment and stability of racial homogeneity and white dominance. Thus, the percent of the population that is white and remains white over time is an important focal point. This thesis is not about people of color, as much of the literature on segregation focuses on. Instead, this thesis attends to the impacts of white populations and practices of racial exclusion to preserve white spaces.

Size Categories Within the Region

County size categories allow for the use of meaningful grouping of place-based contexts. These size categories represent different ranges of growth patterns, built environment, and social experiences within the metro region and allow us to grasp the range of variety within a region (Farmer, 2018; Monnat & Beeler Pickett, 2011). Growth patterns relate to various population characteristics. County size captures the range of civic life that is possible which can change the attractiveness or development of social and economic opportunity. It also indicates how strongly population change will be felt,

particularly smaller counties will feel growth and decline more strongly than those with larger populations.

County population size can relate to the built environment, which is shaped by resident engagement in civic and economic life, resource capacity to develop new housing, infrastructure, consumer, and employer resources. Similarly, larger populations will require more and different access to built environmental features including roads, housing, and public services. County size also relates to potential networks and connections. Simmel argues that the mental state in a smaller place may have an impact on how people relate to each other and how far reaching those networks may be (Simmel, 1964). The social experience in-place is shaped by the two characteristics above, built environment and social connections but also by the identity of place, social network density and connection potential to other places.

County population size can mask several characteristics of place, such as residential density, spatial location, and/or proximity to neighboring population. These forces impact the extent to which county population size actually relates to residents' life. However, using size categories gives readers a graspable scale and experience. We know that county with 7,000 people will be different than a county with 70,000 people. Examining population change differences by county size allows us to consider how places in different stages of development and with different relationships to the core and neighboring counties experience racialized population change over time. By using the size categories, we can

look not only at how much each place changes, but also relate county size to the experience of changes across place.

I create three size categories based on natural breaks that emerged in the data. Because I am assessing how places change, I use the 1970 population size as the baseline for this time period to adequately captures the changes occurring in the region before the gentrification. These size categories are unique to the Cincinnati MSA: Small (up to 10,000 people), Medium (10,000 to 50,000 People), Large (50,000 to 500,000 people), and Core (more than 500,000 people). Only the Cincinnati's core county, Hamilton, has over 500,000 residents.

Highway Data

To identify access to access to connectivity and resources, I examine the interstate highway location and total miles. I calculated the number of highway miles in each county by merging Ohio, Indiana, and Kentucky Major Roads Shape file, selecting only interstate highways, and selecting roads in the 16 MSA counties ("2010 TIGER/Line Shapefiles [machine-readable data files]/prepared by the U.S. Census Bureau," 2012). Highway shapefiles were then simplified to ensure that split highway segment miles were not double counted. Last, total miles per county were calculated. Using Google road maps, current bridges crossing the Ohio River were also identified.

Housing Data and Reasoning

In order to identify historical context and process, housing trends are used as indicators of local practice and relationships towards development. Census decennial data

on the age of housing, specifically the proportion of housing built in the most recent decade paints a picture of the decision-making carried out in counties. For example, public housing, private development, zoning, expansion, renovations, and other changes in housing stock all require permits and enough engagement for financial support or investment. Economic development, a concurrent process, relates to a place's history of exclusionary practices based on race (Crowe 2012).

Housing trends are used as indicators of local practice and relationships towards development. While the data do not assess local power dynamics, or public attitudes towards development, we can see the outcomes of local practices including, for example, cooperation, leadership, private interests, state interests, and public opinion. In this thesis, I measure various dimensions of housing including percent vacant, percent built in the past decade, total number of housing units, and change rate of housing units. These measures capture the material impacts of local practices for a county and, thus, the *outcome* of local negotiations and interactions over time (Figure 2). I created the time series drawing on Census sample-based housing data from 1970 to 2000 and ACS 3-year estimates for 2010 made available by the NHGIS. Because housing vacancies were not in a time series, so I compiled data from unique files in the NHGIS database, 1970 through 2000 Census files and 2010 three-year ACS.

Figure 2 Regional Dynamics with Cincinnati Metro Variables
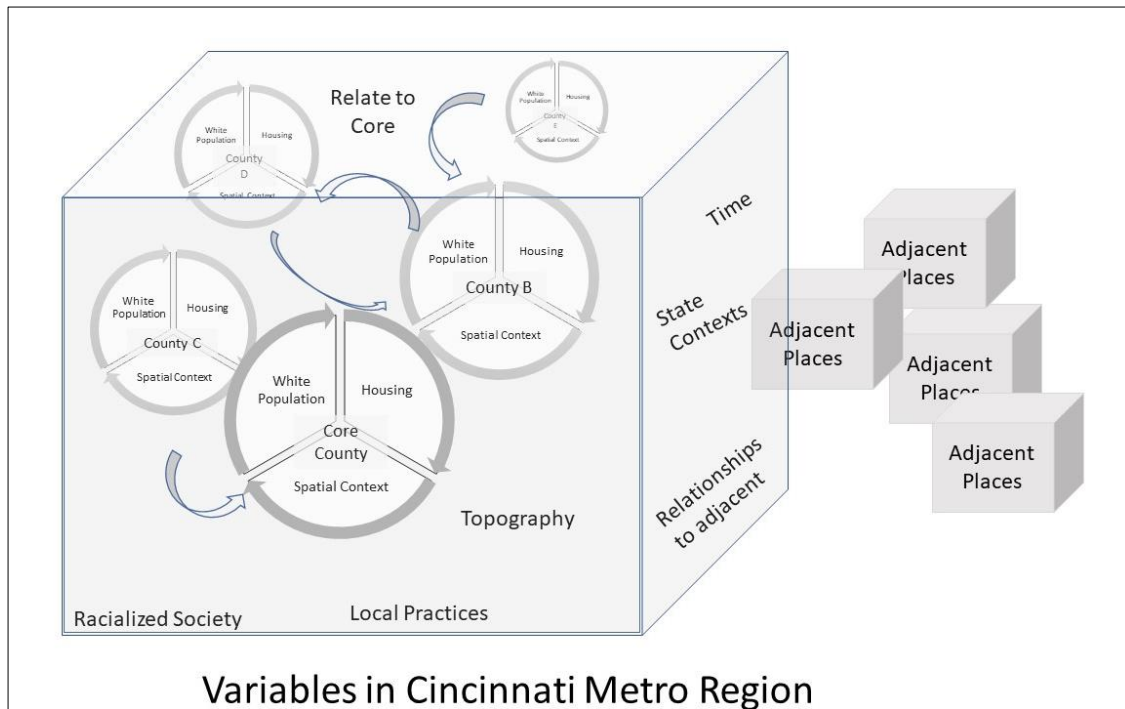
Analysis Overview

To analyze the Cincinnati Metropolitan Region, I first compared population growth rates and racialized change across county size categories, then examined the internal heterogeneity, and, lastly, examined the regional dynamics of change over time in a spatial context. Determining which counties of different sizes change together and which show divergent patterns of total population growth and racial composition indicate an overarching degree of change and an implicit possibility of exclusionary practices. These differently sized counties not only change differently, they also subsequently continue distinct development patterns based on the local place-base experience. In the second part of the analysis, I add the spatial and material contexts to bring more nuance to the interpretation and implications of observed population change. Highway access, housing

stock, and spatial location further impact the place-based behavior and resources and inform our understanding of population change over time.

Findings: Cincinnati Regional Population Patterns

County Level Patterns of Population Change

As general categories, Small counties changed less and Large counties changed more. However, the data also show that place-specific patterns of change contain important heterogeneity. When we only look at core versus non-core counties, it appears that counties outside of the city core are growing. Yet, digging deeper into differently sized categories, spatial location, and housing development practices, we see a range of development pathways. These pathways are at times counterintuitive either because of unusually fast growth and change or due to notable stability and remarkable lack of change.

The non-core counties in the MSA grew an average of 14.3% each decade (Table 1). The Medium counties showed the largest growth rate over the period, with an average of 18.7% points per decade. In Figure 3, each size category's population change is shown across the decades 1970 to 2010, organized by initial population size. Small counties experienced the most variation decade to decade (likely due to higher sensitivity to change because of the smaller denominator). Large counties, on the other hand, showed the steadiest growth over the 40-year period.

Table 1 Average Population Percent Change Per Decade by Size Category

	1970 to 1980	1980 to 1990	1990 to 2000	2000 to 2010	Average Across Decades
Small	15.2%	7.5%	20.9%	6.1%	12.4%
Medium	23.0%	12.1%	25.5%	14.2%	18.7%
Large	13.1%	9.7%	16.8%	12.6%	13.1%
Core	-5.5%	-0.8%	-2.4%	-5.1%	-3.4%
Non-core	16.6%	9.5%	20.8%	10.4%	14.3%

Figure 3 Growth Rates by Size Category
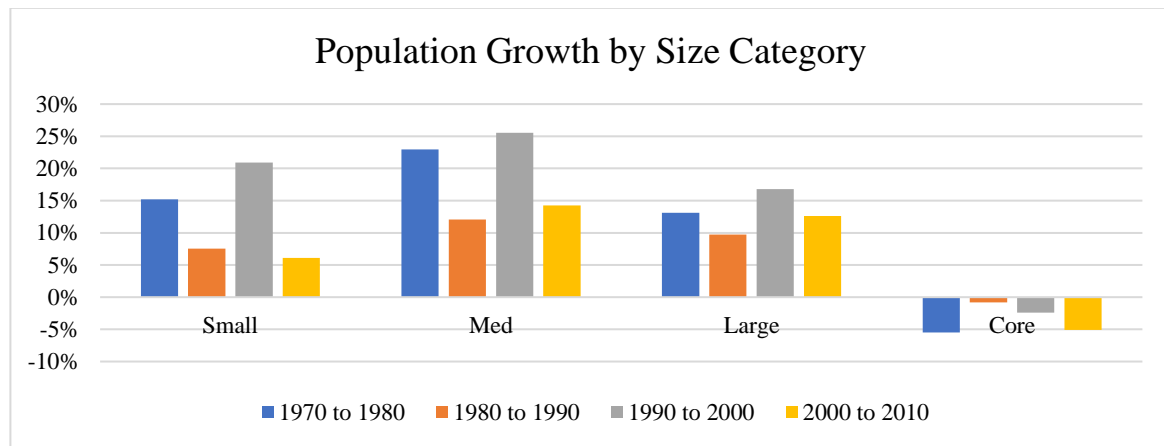
Growth Patterns

Between 1970 and 2010, the core county, Hamilton (OH), declined in population. By contrast, Medium counties experienced the fastest growth, followed by Large and Small counties at 69% and 63.1% (Table 1), growth rate respectively. As mentioned earlier, examining the size categories separately helps us grasp a variety of place-based experiences and capacity for change. Considering initial population size, we can infer that Medium counties had a balance between the social, economic, and material resources available in Large counties and Small counties, thus allowing room for development of new infrastructures. In other words, the Medium counties may have had "room" and

resources to grow (i.e., housing, schools, and road infrastructure), while Large counties

had less "room" hindering growth and Small counties may have had fewer resources to

accommodate growth.

When we drill down into the individual counties, several distinct trends emerge. In

Table 2 below, while most of the counties experience overall positive growth rates during

the study period, two counties experienced a decade with no growth or population loss.

Between 1980 and 1990, Franklin (IN) was nearly stable with a growth rate of -2%.

Campbell (KY) declined in population between 1970 and 1980, decreasing from 88,501

people to 83,317 people (Table 3), a declining by 5.9% in 10 years. During the study

period, Campbell County's population growth stagnated staying stable and close to the

population size reported in 1970.

Table 2 County Population Change Ranked by Initial Size

Size Category	County	1970-1980	1980 - 1990	1990 - 2000	2000 – 2010
Small	Gallatin, KY	17.1%	11.4%	45.9%	9.1%
	Ohio, IN	19.2%	3.9%	5.8%	9.0%
	Union, IN	4.2%	1.7%	5.4%	2.3%
	Bracken, KY	7.1%	0.4%	6.6%	2.5%
	Pendleton, KY	10.5%	9.5%	19.6%	3.4%
	Grant, KY	33.1%	18.3%	42.2%	10.2%
Medium	Franklin, IN	15.8%	-0.2%	13.1%	4.2%
	Brown, OH	19.8%	9.5%	20.9%	6.1%
	Dearborn, IN	16.5%	13.3%	18.7%	8.5%
	Boone, KY	39.7%	25.6%	49.3%	38.2%
Large	Warren, OH	16.9%	14.7%	39.0%	34.3%
	Campbell, KY	-5.9%	0.7%	5.7%	1.9%
	Clermont, OH	34.2%	16.9%	18.5%	10.9%
	Kenton, KY	5.9%	3.6%	6.6%	5.5%
	Butler, OH	14.4%	12.6%	14.2%	10.6%
Core	Hamilton, OH	-5.5%	-0.8%	-2.4%	-5.1%
Non-Core	All counties except Hamilton	14.8%	11.1%	18.9%	14.0%

Table 3 County Populations by Decade Ranked by Initial Population Size

Size Category	County	1970	1980	1990	2000	2010
Small	Gallatin, KY	4,134	4,842	5,393	7,870	8,589
	Ohio, IN	4,289	5,114	5,315	5,623	6,128
	Union, IN	6,582	6,860	6,976	7,349	7,516
	Bracken, KY	7,227	7,738	7,766	8,279	8,488
	Pendleton, KY	9,949	10,989	12,036	14,390	14,877
	Grant, KY	9,999	13,308	15,737	22,384	24,662
Medium	Franklin, IN	16,943	19,612	19,580	22,151	23,087
	Brown, OH	26,635	31,920	34,966	42,285	44,846
	Dearborn, IN	29,430	34,291	38,835	46,109	50,047
	Boone, KY	32,812	45,842	57,589	85,991	118,811
Large	Warren, OH	84,925	99,276	113,909	158,383	212,693
	Campbell, KY	88,501	83,317	83,866	88,616	90,336
	Clermont, OH	95,725	128,483	150,187	177,977	197,363
	Kenton, KY	129,440	137,058	142,031	151,464	159,720
	Butler, OH	226,207	258,787	291,479	332,807	368,130
Core	Hamilton, OH	924,018	873,224	866,228	845,303	802,374
Non-Core	All counties except Hamilton	772,798	887,437	985,665	1,171,678	1,335,293

While we may expect growth in Large counties, consistent growth is not experienced by all Large counties, nor is it limited to Large counties. In the Figure 4 below, we can see the relationship between population size and rate of change across all counties. Figure 4 shows how within size category (y-axis), counties experience different degrees of population change (x-axis). Boone (KY), a Medium county, experienced rapid growth rates. In fact, Boone grew so rapidly it eventually exceeded the size of Campbell (KY) which began as one of the largest counties. Larger counties in the top section of the plot vary in growth rates as do Small counties in the bottom section, though Boone certainly experienced exceptional growth in the context of the whole region.

Figure 4 Population Change and Population Size
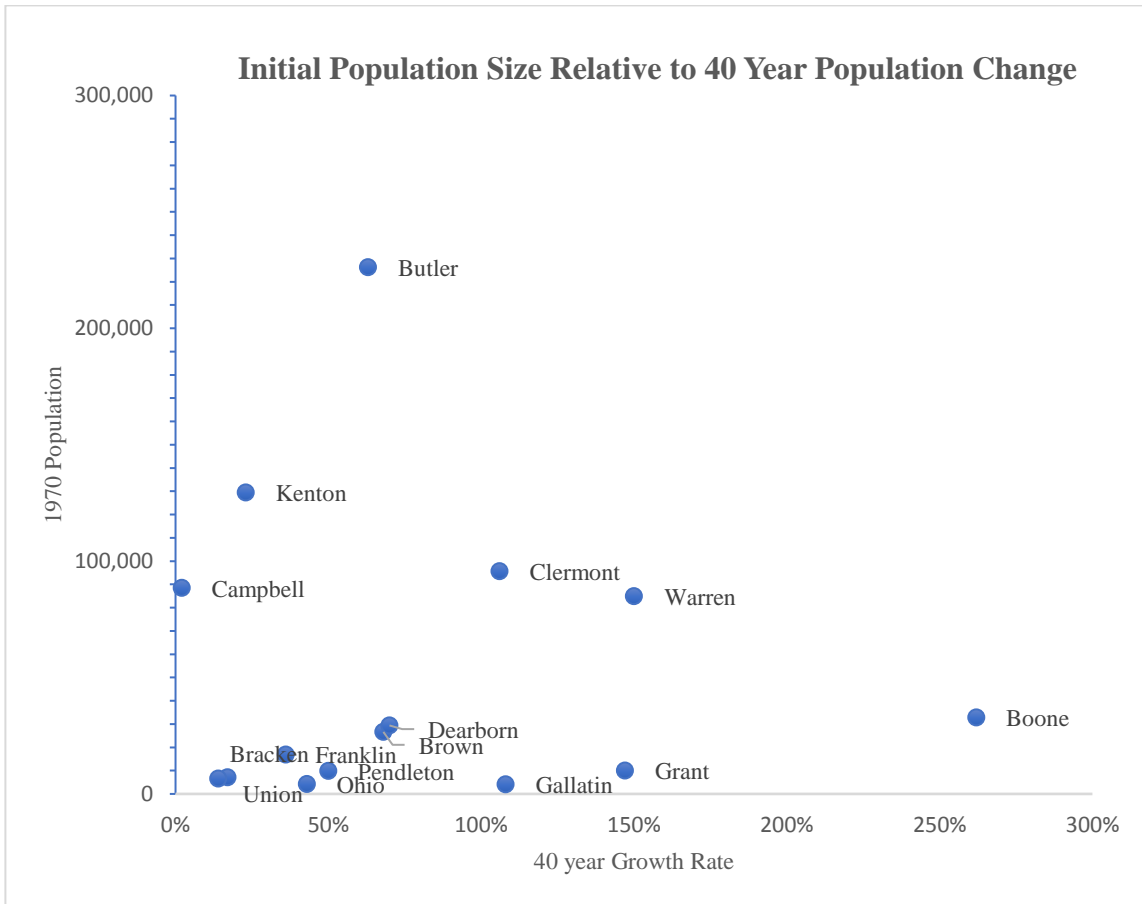
Small counties in this region also demonstrate the range and dynamism possible in the region. Some Small counties showed slow growth: Union (IN) and Bracken (KY). Other counties experienced slow growth rates near 50% Pendleton (KY) and Ohio (IN). Gallatin (KY) and Grant (KY) experienced the largest growth rates. Gallatin (KY) is particularly interesting because it had the smallest initial population size in the region. The clustering of growth rates within these groups varies, too. Though some Small counties have a rapid rate of growth, they remain Small counties. We see this by looking at how scattered from left to right the Small counties are in the plot above. Thus, an overview of

the region may wash out the significance of this extraordinary growth occurring in these smaller places.

Patterns of Changes in White Populations

The general population changes show us that there are different growth patterns between categories of county size, with some evidence of within-category differences. We can examine how these population changes may be racialized in place by looking at how the population of white people in these counties changes as a proportion of the total. As discussed earlier, this metric can show the unevenness of practices of racial exclusion. In Table 4 we see that smaller population sizes correspond with larger white populations. Overall, each county is majority white with the 1970 proportion white ranging from 94.8% to 99.9%. Still, variation exists and, thus, suggests openings for distinct local racialized processes.

Table 4 Percent White by Decade Ranked by Initial Population Size

Size Category	County	Initial population Size 1970	1970	1980	1990	2000	2010	40 Year Change in Percent White
Small	Gallatin, KY	4,134	97.4%	97.4%	97.9%	96.7%	94.7%	-2.7%
	Ohio, IN	4,289	98.5%	98.5%	98.9%	98.7%	98.1%	-0.4%
	Union, IN	6,582	99.4%	99.4%	99.1%	98.7%	97.5%	-1.9%
	Bracken, KY	7,227	99.0%	99.2%	99.3%	98.5%	97.8%	-1.3%
	Pendleton, KY	9,949	99.3%	99.9%	99.3%	98.4%	98.2%	-1.2%
	Grant, KY	9,999	99.3%	99.3%	99.6%	98.3%	96.7%	-2.6%
Medium	Franklin, IN	16,943	99.9%	99.6%	99.6%	99.0%	98.3%	-1.6%
	Brown, OH	26,635	98.0%	98.6%	98.6%	98.1%	97.5%	-0.5%
	Dearborn, IN	29,430	99.2%	98.8%	99.0%	98.1%	97.5%	-1.7%
	Boone, KY	32,812	99.4%	99.1%	98.5%	95.2%	91.8%	-7.6%
Large	Warren, OH	84,925	98.4%	97.9%	97.0%	94.7%	90.5%	-7.9%

	Campbell, KY	88,501	98.9%	98.6%	98.5%	96.6%	94.3%	-4.6%
	Clermont, OH	95,725	98.9%	99.0%	98.6%	97.1%	95.9%	-3.0%
	Kenton, KY	129,440	97.0%	96.7%	96.4%	94.0%	91.0%	-6.0%
	Butler, OH	226,207	94.8%	94.6%	94.3%	91.2%	86.0%	-8.8%
Core	Hamilton, OH	924,018	83.9%	80.1%	77.7%	72.9%	68.8%	-15.1%

Generally, the pattern shows that larger, more racially diverse places experienced faster declines in the white population. Yet there are cases that differ from this dominant trend: some Small counties' racial composition changed dramatically, while the white populations in some Large counties remained stable. These distinct patterns are influenced not only by the rate of change of population, but also correspond to development of infrastructure and housing (elaborated in a later section). Furthermore, these county level patterns impact the experiences of existing populations of people of color and long-entrenched white populations.

The uneven pattern of change in the white population across counties is shown in the "tree-ring" graph below (Figure 5). The non-core counties are compared side by side as different points radiating from the center. Each county has a line corresponding with the percent of its population that was white in the respective year. Overall, all the counties' population percent that is white decreased over the 40-year period. However, there was a variety in the extent of change across place and between the decades. Small counties generally had minor changes in percent white and larger counties had greater change. Notably, Pendleton (KY) had a decrease in people of color during the first decade of the study period, resulting in the county reporting its highest percent of white residents in 1980

(99.9%). Over time, some counties' share of the white population remained steady at more than 97%. By 2010 the smallest county, Gallatin (KY), had a 94.7% white population, the lowest proportion white among the Small counties. On the other hand, of the Small counties, Pendleton had the largest proportion white population at the end of the study period (98.1%).

Figure 5 Tree Ring Chart Percent White Over Time by County, Ranked by Initial Population Size
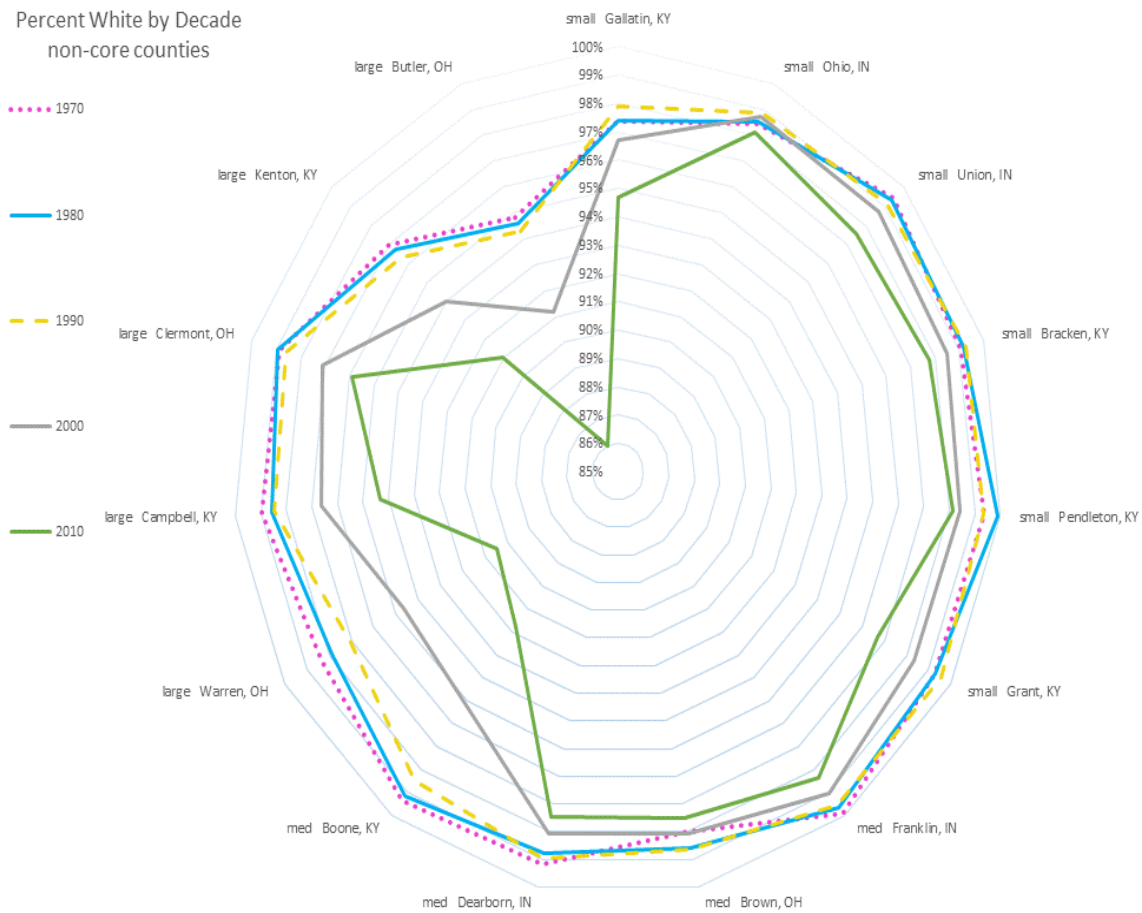
The counties are arranged by size around the circle with the smallest at the top and getting larger as you go clockwise

Butler (OH) began and remained the non-core county with the smallest percentage white population in the region, reporting 94.8% in 1970 and 86.0% in 2010. The counties with the most racial change were Kenton (KY), a Large county, and Boone (KY), a Medium county. Kenton changed from 97.0% white in 1970 to 91.0% in 2010. Similarly, Boone's white population declined from 99.4% to 91.8% over the study period. Remarkably, Clermont (OH) changed very little compared to its fellow Large counties, starting at 98.9% in 1970 to 95.9% white in 2010.

When we look at Small counties, the percent of the population that was non-white started below 3% with only one county having above 2% non-white residents. By the end of the study period, most of these Small counties remained more than 97% white except for Gallatin (KY). It is crucial to note that fluctuations in these small populations, under 10,000 people, could be driven by only a small change in the number of people. Pendleton (KY), for example, had an increase of 1% in the white population resulting from a decline of 52 people of color between 1970 and 1980. From an urban change perspective, 52 people is a small number. However, considering how small the population of people of color was to begin with (in this case, 65 people), such a change is meaningful and noticeable in a local context.

When we look at Medium counties only, we find a very similar trend to that found for small counties. Populations in Medium counties began with under 2% people of color in 1970. Indeed, almost all Medium counties remained under 3% people of color, except for Boone (KY). In fact, in 1970, Boone county had a 99.4% white population and by 2010

this amount declined to 91.8%. This 7.6% point change is markedly different than the stable trends found for the other Medium-sized counties.

In Large counties, the total proportion of the population that is white decreased faster than in Medium and Small counties. Yet, again, we see that there is variation. Starting with more people and more people of color in 1970, Large counties all experienced some growth in the proportion of their populations that did not identify as white by 2010. Yet, most large counties also started off with only a small (under 3%) population of people of color. Butler (OH) was the exception with approximately 94.8% white population, the lowest percentage white population at the start of the study period. Most of the Large counties' populations of people of color increased threefold by the end of the study period. A clear pattern does not emerge between growth rates and the proportion of the population that is white.[6]

County Level Trends Vary by Spatial Location and Material Contexts.

To tease out possible explanations for the observed differences in population change between and within county size categories, I examine the spatial and material contexts of the counties. I find that county trends vary by spatial location and material contexts. This section will analyze the population and racial change patterns in the context of the physical, built environment. First**,** I examine their spatial contexts. Places are connected, proximate, or distant from each other based on location and natural topography.

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[6] For more details see Appendix Figure 1: Change in Percent White and County Growth Rates.

Then, I look at patterns by material contexts and the dimensions along which they vary. Material contexts include infrastructure such as housing stock and highways.

Spatial and Historical Contexts Relate to Patterns of Population Change: Local Landscapes Shaped by Geography

As described earlier, the Cincinnati Metropolitan Region is bisected by the Ohio River. In relation to population totals, change and growth, the river appears to be less important than the highway systems, and there is no clear pattern centered on the location of the river. Yet, the cooperation between counties and states to develop and maintain a bridge is not an inert fact of the region, and these factors affect population change and flows. While some counties are connected with bridges and interstate highways—such as Campbell and Hamilton, near the core of Cincinnati—they are not necessarily faster to change, grow, or show any of the indicators of a well-connected, central location. Instead, Campbell, and its neighbor Kenton, both in Kentucky, appear to have stagnate growth (Map 2). Contrary to the spatial contexts and their size categories, these places remain

stable while their more isolated neighbors, such as Clermont (OH) and Pendleton (KY), are

growing and changing in terms of racial composition.

Map 2 Cincinnati Metro Region with 40 Year Growth Rate
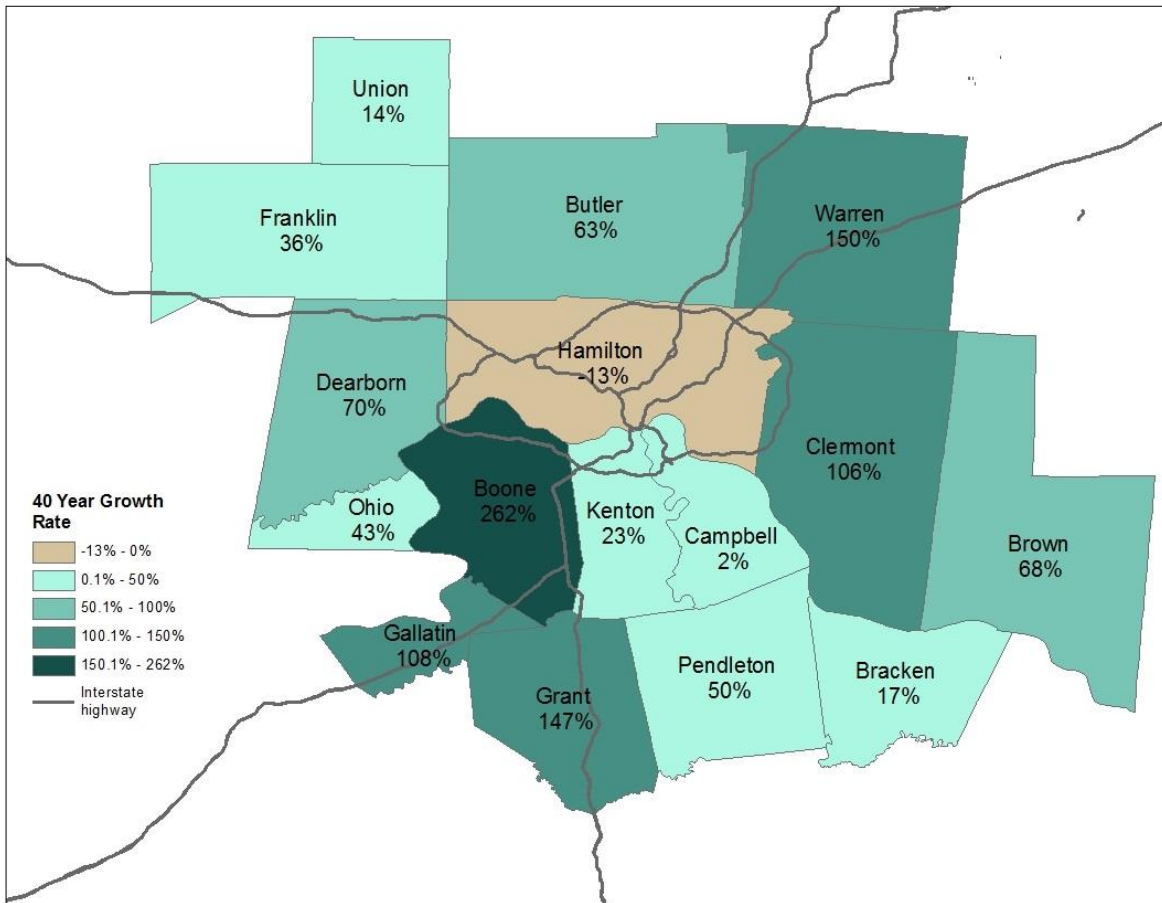
Informing the previous analyses with these spatial contexts allows a for a clearer

appreciation of the complexity of places. Table 5 shows the geographic features such as

highway miles, bridge access, and river boundaries. It is easy to see that though Warren

(OH) and Grant (KY) do not have access to the river and its bridges, they are not

disconnected from other counties. In fact, the results show that not being *bound* by the

metro region the way that the core county, Hamilton (OH), and adjacent Kenton (KY), and

Campbell (KY) may be a allowing these seemingly disconnected edge counties to grow

and change within the regional system.

Table 5 Change in Percent White, Growth Rate, and Geographic Features

Size Category	County	Percentage Change White 1970 To 2010	Growth Rate 1970 To 2010	Interstate Miles	River Border	Access to Bridge	Interstate Highway?
Small	Gallatin, KY	-2%	107.8%	16	y	Y	y
	Ohio, IN	0%	42.9%	0	y	n	n
	Union, IN	-1%	14.2%	0	n	-	n
	Bracken, KY	-1%	17.4%	0	y	n	n
	Pendleton, KY	-1%	49.5%	0	y	n	n
	Grant, KY	-2%	146.6%	23	n	-	y
Medium	Franklin, IN	-2%	36.3%	4	n	-	y
	Brown, OH	0%	68.4%	0	y	y	n
	Dearborn, IN	-2%	70.1%	17	y	y	y
	Boone, KY	-7%	262.1%	33	y	y	y
Large	Warren, OH	-8%	150.4%	34	n	-	y
	Campbell, KY	-5%	2.1%	10	y	y	y
	Clermont, OH	-3%	106.2%	14	y	n	y
	Kenton, KY	-6%	23.4%	19	y	y	y
	Butler, OH	-9%	62.7%	11	n	-	y
Core	Hamilton, OH	-15%	-13.2%	96	y	y	y
Non-Core	*Average of Non-Core Counties*	*-3%*	*72.8%*	*11.79*	*10 of 15 on River*	*6 of 10 w/ bridge*	*5 of 15 w/o Highway*

When we look at the spatial relationships among the counties and the percent of

their populations that are white, there is a gradient pattern with most adjacent counties

sharing similar proportions of white populations (Map 3). Upon examining the built

environment, we see that the counties with the lowest proportion white population

generally locate along the I-75 highway corridor, which connects to Dayton in the north

and to Lexington well south of the city, and along the 1-71 corridor, which connects to

Columbus in the north and Louisville to the south. There is no corresponding pattern for

the I-74 corridor which comes into the region from the west from Indianapolis and ends in

Cincinnati. Table 5 present all the counties' access roads, bridges, and the river.

Map 3 Percent White in 2010 with Highway Features
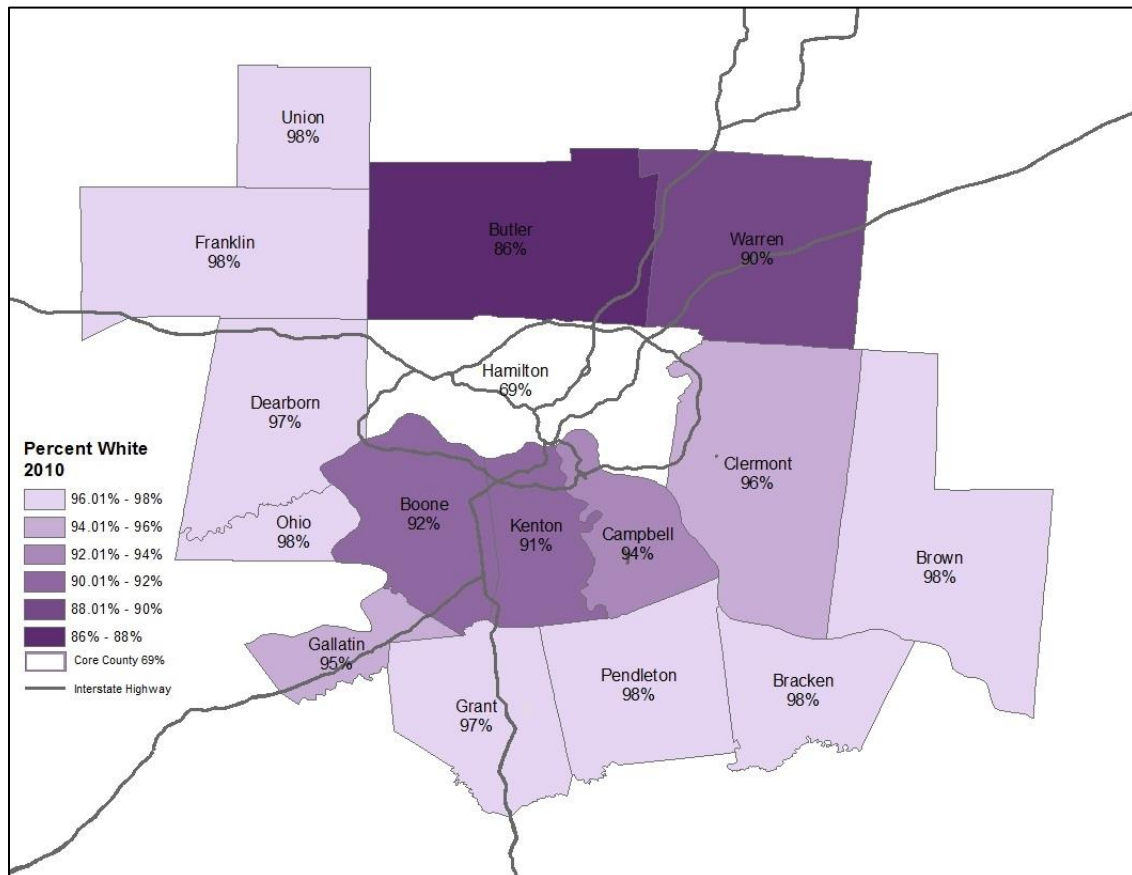
The data show that spatial connectivity is associated with growth and increased

diversity, though the pattern is stronger for the I-75/I-71 corridor than the I-74 corridor. On

the other hand, there are important exceptions to the pattern of connectivity even among

counties along the I-75 and I-71 corridors. Moreover, I examined the number of highway

miles in each county and found that the core county of the Cincinnati metropolitan region

is clearly in population decline, despite having the most interstate highway miles.

However, the three non-core counties with the most highway miles Grant (KY), Boone (KY), and Warren (OH) had the fastest growth rates. In contrast, the county with the 4th-*most* interstate highway miles, Kenton (KY), is also the 4th *slowest grower* in the region. Kenton has a growth rate over the study period of only 23%. Results show that having limited access to highway miles does not preclude a county change in the share of its white population. Butler (OH), which doesn't have an array of highway segments—only one stretch of 11 miles—had the largest change in the percent white (8.78%). Conversely, Gallatin (KY) which has 19 miles of interstate highway had a much lower change in the proportion of its population that is white (2.71%). Although both of these places have similar, limited access to the same highway corridor, they had different types of change in their white populations.

Together, these patterns suggest highways have important, but context specific relationships to population growth and change. While county access to highways can have a strong pattern of growth and diversity, this case had several examples also showing the contrary. Highways are important to include in a conceptual frame and will require careful attention not only to the in-place number of miles, but also to the larger regional contexts of the transportation network. For example, it seems important to establish which places

are linked, proximate, and have corridors of traffic not based on the Interstate Highway systems.

Housing: Socially Shaped Landscapes

Housing is a strong marker of in-place material experience. Particularly when assessing where people live, long-term policies, practice, and investment shape the housing stock and whether people want or are able to move or stay in place. Total housing relates to the development of new housing, maintenance of old housing. Vacancies will vary based on both population changes and whether housing increases or decreases in response to the changes, and at what pace. There may be an anticipation of population growth that never comes, or a population boom that developers cannot keep up with.

While rivers, highways, access to bridges and proximity to other large-population places were expected to have impacts on population patterns, the analyses above show that the spatial contexts of places alone are not a clear-cut perspective from which to understand growth and change in this regional context. Though some places, like Boone County (KY), are clear cases of growth coupled with diversity, neighboring counties proved to have distinct outcomes. Nonetheless, an array of factors shape the experiences within place. This suggests that it is not solely social processes, nor is it solely material contexts, but both contexts together that shape how places develop. This analysis suggests

that, rather than working independently, social and material processes interact and shape one another as they influence the development of places.

Housing

All of the counties in the region—including Hamilton (OH) which is *decreasing* in population—have increased in total housing units over time (Fig 6). The only exception is that Ohio (IN) had 9 fewer units in 1990 than it did in 1980, although over the study period the county had a housing growth rate of 82%, growing from 1,525 units in 1970 to 2,784 in 2010.

Figure 6 Total Housing Growth by Decade
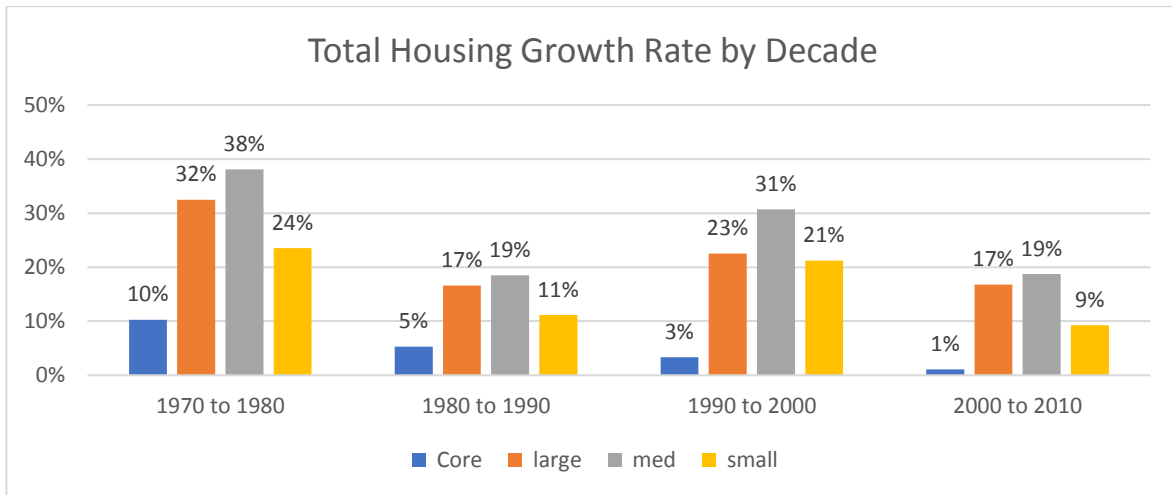
Across the board, the 2000s were the slowest year for new building, resulting in the average percent of new housing in 2010 dipping to 12.4% (Table 6). Hamilton (OH) has a pattern of decreasing new housing every decade from 1970 to 2010. Campbell (KY), has also had a slow development of new housing, and is the core-proximate county that resisted population growth and only slowly changed the dominance of white population. A

possible explanation is that Campbell (KY) was following the trend of neighboring

Hamilton (OH). Yet, the amount of new housing indicates that it did not follow the same

trajectory as Hamilton (OH). Hamilton was developing new housing in the 1970s, but the

amount new housing steadily declined every decade after. Campbell, on the other hand,

hovered around 15% new housing from 1970 to 2000, then dipped to 10% new housing in

the 2000s.

Table 6 All Counties Percent New Housing and Average Housing Growth Rate per
Decade, and Change in Total Housing, Ranked by Initial Population Size

	County	1970	1980	1990	2000	2010	Average New Housing Each Decade	40 Year Total Housing Change
Small	Gallatin, KY	14%	25%	25%	37%	14%	23%	158%
	Ohio, IN	19%	26%	18%	24%	10%	19%	83%
	Union, IN	17%	21%	14%	15%	11%	16%	44%
	Bracken, KY	8%	17%	19%	19%	8%	14%	47%
	Pendleton, KY	17%	22%	21%	27%	10%	19%	86%
	Grant, KY	22%	31%	30%	38%	20%	28%	150%
Medium	Franklin, IN	16%	25%	18%	22%	14%	19%	83%
	Brown, OH	19%	29%	21%	27%	13%	22%	116%
	Dearborn, IN	16%	27%	22%	26%	14%	21%	110%
	Boone, KY	41%	43%	34%	42%	30%	38%	368%
Large	Warren, OH	30%	31%	23%	34%	26%	29%	236%
	Campbell, KY	15%	13%	15%	16%	9%	13%	41%
	Clermont, OH	26%	41%	26%	25%	16%	27%	192%
	Kenton, KY	19%	22%	16%	16%	10%	17%	62%
	Butler, OH	23%	29%	21%	21%	13%	21%	114%
Core	Hamilton, OH	22%	15%	10%	8%	5%	12%	21%

Figure 7 below shows how total housing relates to percent of new housing over time. The general trend includes less new development in the 2000s (the pink line) and peak development in either the 1970s or 1980s. However, despite the general trends, some counties took markedly different paths. Grant (OH) continued to develop new housing. Campbell (KY), on the other hand developed less new housing which would align with the county's general slow population growth. The chart below demonstrates that new development occurred at varied degrees and timing among the counties, yet. as a whole, the region shared a decline in new development in 2010.

*Figure 7 Total Housing Units and New Housing Units by Decade*
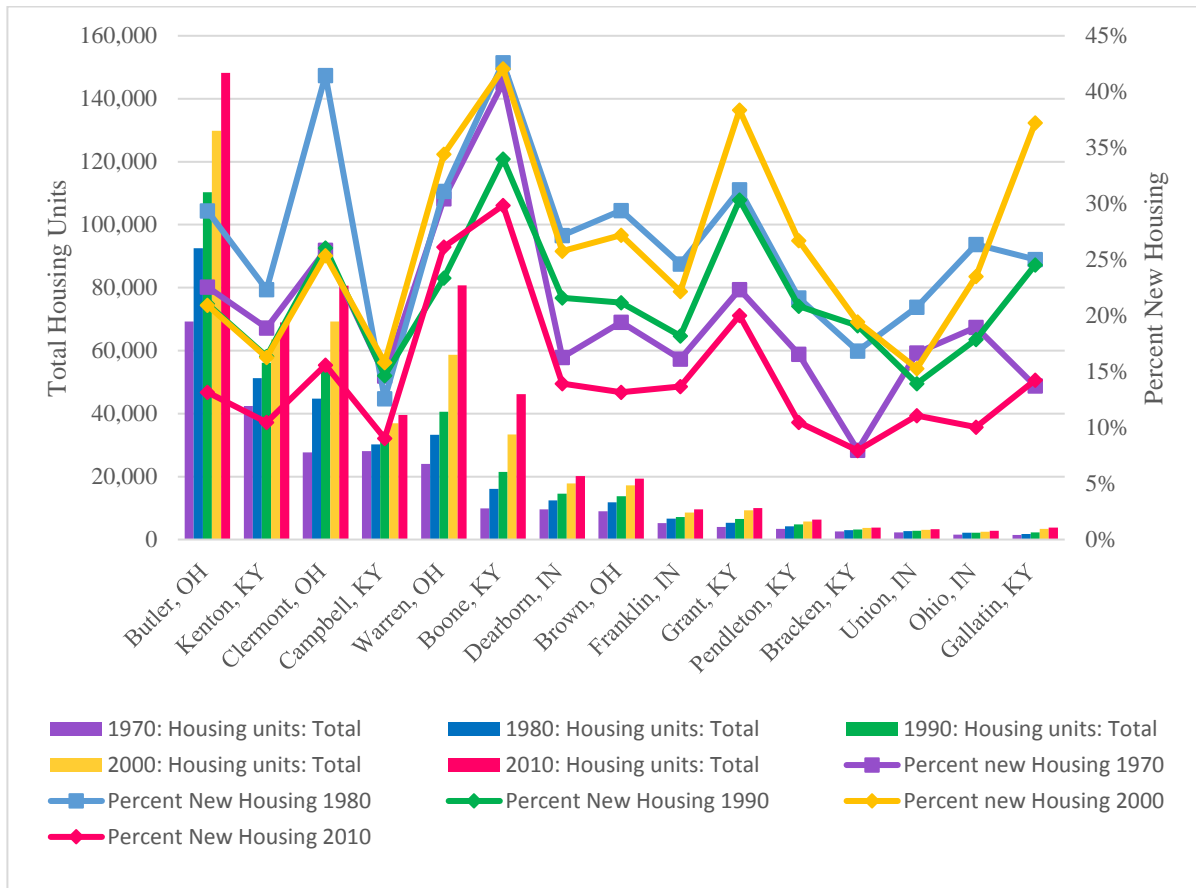
Vacancies

Vacancies occur when housing units are not occupied. They may be vacant because of a lack of people or desirability of the unit. This is an indicator of the social context occurring in a place. Overall, the counties in the Cincinnati Metropolitan region had an increase in housing vacancies. As the chart above, shows, there are several outliers. To address the increase of housing vacancies, we must look at how much of the housing stock is built within the last ten years. Above in Figure 7, we see that in 2010, all the counties had a smaller proportion of their housing stock consisting of buildings under 10 years old (the pink line). The 1970s was the peak decade for new development. This data is considered within the context of the built environment examined above (i.e., highway systems). As expected, we see a steady decline in new housing in the core county, Hamilton, that corresponds with the county's declining population.

A simplified view of vacancies by size category, Figures 8A and 8B, shows some general trends. Within these categories, as we saw above, there were several distinct cases. To determine whether these outlier counties were influencing the trends more broadly, these distinct counties were removed and reveal the same general pattern across size

categories with non-core counties experiencing more vacancies as counties have smaller population sizes.

Fig. 8A Vacancy rates by Size Category, Fig. 8B Vacancy rates without Boone, Campbell, Grant
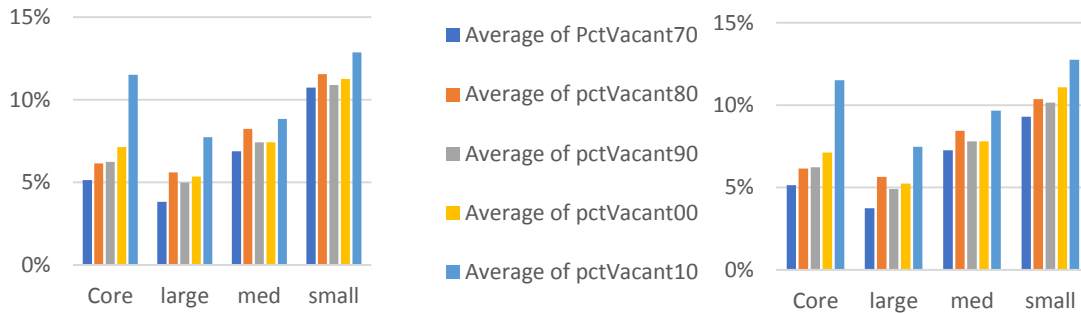
## Spatial Contexts, Housing, and Counties: Emergent Cases

This analysis suggests that centrality is an important facet of housing patterns. While there is a visible trend of smaller and more white counties further from the core, there are exceptions. It is these exceptions that are of particular interest because they indicate distinct patterns of exclusion and local practices. Grant (KY), a non-centralized county, is one of the top three growing counties. Meanwhile, Campbell (KY) is centrally located but experienced distinctly stable population patterns and slow growth.

Grant (OH) is an emergent case. It is not highly connected, started off with a small initial population, and has retained a mostly white population, only changing by 2% between 1970 and 2010. Yet, Grant also saw a decline in housing vacancies, the only county in the region to have a smaller proportion of its housing stock vacant in 2010 than it had in 1970. Grant emerges as a unique case because its overall racial composition

remained stable and it has also managed to close its vacancy gap whereas all the other

counties have increased their vacancy rates during this period. Though the white

population appears stable, the small population of people of color has experienced

dramatic changes, declining one decade and having an overall 40-year change rate of

104%—changing from 72 to 820 total people of color from 1970 to 2010. Grant's growth

and change does not match its neighbors or peer counties. When we look at the actual

percent vacant, below in Figure 9, we see that Grant had the largest proportion of

vacancies in the 1970s.These data suggest that Grant addressed its large vacancy issue by

building at a very modest rate and occupying its existing housing. A case study of Grant

might show us local decision-making processes to not only slow new development but fill

existing housing. Places with distinct patterns, such as Grant, may have place-based

processes affecting the development of housing and character of place for retention and

attraction of new residents that cannot be explained solely by their inter-connectivity. The

development of new housing and changes in racial composition indicate those place-based

potentials and their impacts.

Figure 9 40 Year Change in Vacancies and 40 Year Population Growth Rates
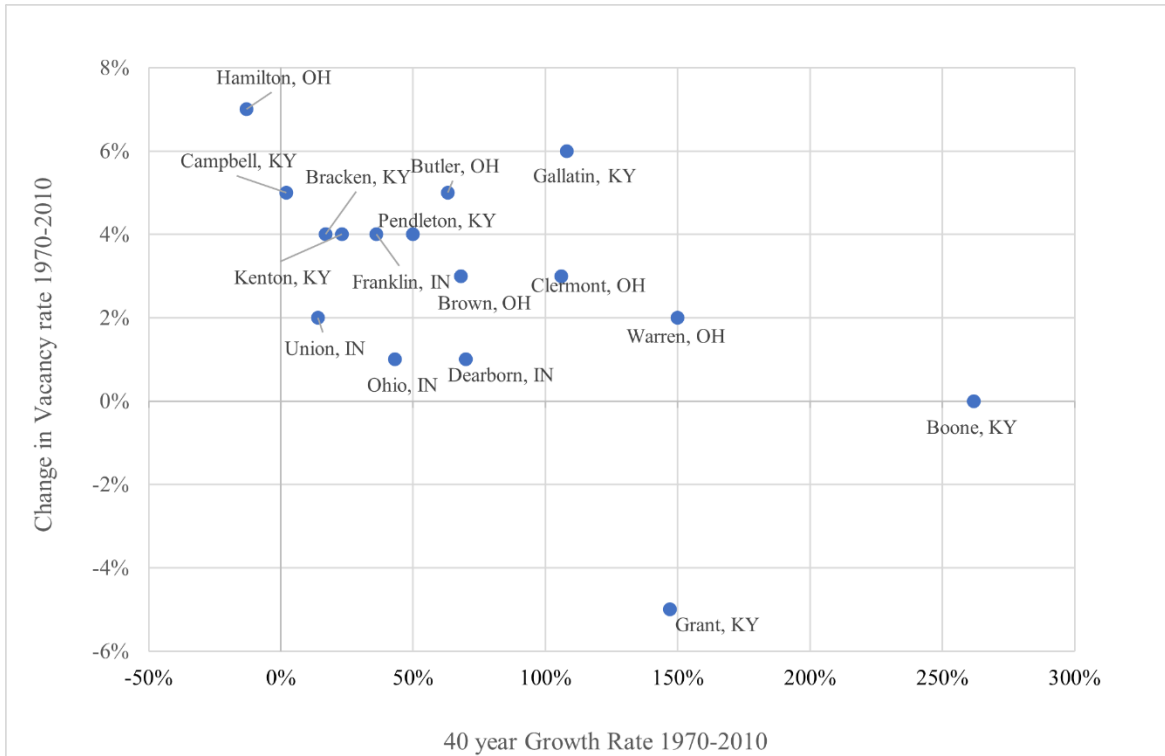
Conversely, centrally located Campbell (KY) seems like a candidate for growth since it is

one of the more connected counties. Campbell is at the center of the region, with access to

multiple bridges and access to the interstate highway system. Closer inspection of the

highway location *within* the county, however, shows that highway access is concentrated at

the northern end of the county and connects to the declining core. This Large county was

notable for steadily maintaining a low percentage of new housing, and Campbell,

unsurprisingly, also had the lowest change in total housing for the 1970-2010 period (41%)

and never exceeded 15.82% new housing (Table 7). The housing context in this county is further illustrated by the 2010 vacancy rate, which was 5% greater in 2010 than it was in 1970.

Campbell (KY) has increasing vacancies, slow building of new housing, and generally slow growth of available housing. At the same time, the white population has gone from being 98.57% to 94.33% of the total population. Even without having the details on what type of housing is available, Campbell is showing slow overall growth and modest change in the proportion of the county that is white. What we cannot clearly see from these data is how local practices shaped the housing stock, accessibility, and general development of the area during this period. Consequently, these data do not reveal if the slowing of new housing was a response to or a cause of slow population change.

Implications for the Cincinnati Metro Region

The distinct patterns found in this metropolitan region indicate that place-based patterns are important components of a region as a whole. Through unpacking what happens in the non-core counties, I examined the heterogeneity and identified emergent and divergent patterns of change. In the Cincinnati Metro region, we see hubs for remarkable growth and change, like Boone (KY), and stalwarts of entrenched stability (or resistance to change) like Campbell (KY). The Small counties also show their potential for impacting the regional dynamics of population growth by being places that encourage or discourage population growth over time. These counties with fewer residents and with overwhelmingly majority white populations could create new space for population change

and shifts in a region, or they could remain stable pillars in a metropolitan region, holding in place former structures and practices that affect racial exclusion and overall population change. As social beings, people perceive their region as filled with a variety of *places* and these places are defined through their racialized lenses. I argue that this affects how, where, and when populations grow and change in the Cincinnati region.

Practices of racial exclusion can be covert or overt. By showing the heterogeneity conceptualized as part of a system that is connected to spatial, material, and place-based contexts, I highlight counties in the Cincinnati region that show strong resistance to change and others that exhibited rapid change. I interpret these as potential indicators of racialized exclusion or indicators of capacity for racial inclusivity. Either way there are far reaching implications for how the Cincinnati metropolitan region experiences development and population change.

I found evidence that contrasted with expectations of the literature, namely that total population would correlate with racial diversity with larger populations being more diverse (Lee & Sharp, 2017, p. 43). In the Cincinnati regional context, population size of county did not fully explain the patterns of racial population change. Growth did not occur evenly by racial groups, nor did change in racial composition necessarily relate to growth.[7]

As we saw in the data, Small counties' populations can fluctuate a great deal from decade to decade, at times notably increasing in the proportions of the population that are

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[7] In terms of percent white, the core county has experienced a decline in percent white but started off with a much lower proportion of white residents compared to the non-core counties. This pattern follows what is expected from declining core cities with white flight.

white. For example, Pendleton (KY) *increased* the percent white in the 1980s and decreased all other decades. For Small counties, this was a result not only of growth, but also of a decrease in people of color.

The built environment shapes the possibility of growth occurring because of the opening, closing, or shifting of various housing types. Conversely, the loss or gain of social and family groups can be strongly felt in places with small populations through changes in demand for housing. These shifts also catalyze adjacent changes in social life, services, or work opportunities. Adjacent institutions and infrastructure can serve, employ, or house the population, pulling and pushing a network of relations and other institutions in the wake. Thus, by closing an apartment complex, processing plant, opening of group quarters, prisons, schools, or change in housing costs, one county can shift the demands for a broader range of housing, services, and work. Shifts in population, especially in the further peripheries of the region, impact not only the county where the population change is occurring, but other proximate places within the region.

Racialized distribution of social power is at the core of understanding place-based, racialized systems in a region. By adopting my conceptual frame of *racialized regional dynamics*, which takes into account place-based processes and regional populations as dynamic systems, we can better understand the implications of uneven population growth. When we find a county that has a stable 97% white residents, we infer that this is the result of practices of residents or private interests that wield power or influence over economic resources, governance, planning, and property (see Crowe, 2012).

In this Cincinnati Metro Region, three neighboring counties show patterns consistent with practices that promote inclusion or exclusion. Campbell (KY) maintained a remarkably stable population but experienced some degree of decline in its white population between 1970 and 2010. This suggests some degree of openness to racial change, such as inclusionary practices or the dissolution of exclusionary practices. To the east, Clermont (OH) had the 4th largest growth rate but maintained an overwhelmingly white population, with the proportion white modestly declining by 3%, falling from 98.89% to 95.89% white between 1970 and 2010. These examples illustrate racialized processes occurred (and perhaps are still occurring) *in place* and are shaping local social (racial) experiences and development with consequences for the overall regional pattern.

The dynamism of Boone (KY), suggests further work could uncover local processes that dissolved or overrode local practices of racial exclusion, the result of which was dramatic shifts in racial composition for the county. Boone experienced the most racial and total population change, with both a growing population and a decreasing proportion of white residents. Although Boone is spatially connected to the highway corridor—a context prone to growth—its skyrocketing population is remarkable. During the study period, Boone had a 262% growth rate and went from 99.36% white to 91.78% white. This was the third largest change in the proportion white after Butler (OH) and Warren (OH) (-15.1% and -7.9%, respectively).

The significant changes in Boone can be compared with much more subtle, but still meaningful racial changes in smaller counties. In 1970, Franklin (IN) had the largest

proportion white population at 99.90%. Over the forty-year period, Franklin saw a modest 2% increase in people of color (resulting in 98.34% white population in 2010). At first blush, this change seems negligible. Yet, a change from almost zero people of color to one person of color out of every 50 white people is likely noticeable in the community. This change would likely be significant not only for the white people in the county, but this also is a significant experience for the people of color that are newly present and newly visible in the Medium-sized county. Similarly, Grant (KY) had seemingly modest population changes, yet an increase in the population of people of color along with moderate development of new housing resulted in a decrease in vacancies over time. Further exploration of the population, housing stock, and policies in Grant may yield a particularly distinct pattern of settlement and development practices with regards to racial exclusion and inclusion. Thus, we can see that absolute shifts in racial composition matter, even when they are subtle or do not seem significant in comparison to other counties.

The characteristics of place impact where people settle within the metro-region. All the counties in the Cincinnati Metro region are shifting and adapting to the world around them. In response, residents also shift and adapt their own understandings of the places within a region. Places that were previously unknown become known; areas that were trusted can become less trusted, and vice versa. Through casual interactions with places, residents continue to adapt their perspectives and decision-making about where they live and spend their time. This case study suggests that the Cincinnati region is shaped by place-based practices that are distinct, occur in relation to each other, and that also influence the region as a whole. While a regional narrative of a declining rustbelt city may

have been prominent for the region, at the county-level, distinct trajectories shaped population change including growth, stability, and changes in racial composition. These county level changes altered the local character, practices, and development, impacting shifts of people and resources across the region.

Racialized regional dynamics can strengthen our analysis of population change by integrating the historical fact that exclusion has long shaped where people live and how places develop in the United States. Analysis can move forward from identifying differences across counties to identifying sites of significant processes. One example of these processes is the dissolution of practices of residential exclusion. In Boone (KY), this study's findings suggest that local forces such as decisions on economic development, housing, and built environment promoted dramatic growth in the past 40 years, including growth in the share of people of color. Future research can investigate *how and why* Boone (KY) became an exceptional case. In contrast, Campbell (KY) did not undergo rapid change, suggesting that the contexts of its historical and more recent development policies shaped the county such that it grew slowly in total population and, concurrently, the proportion white changed slowly. My framework suggests that this is an important case to further interrogate how local practices and policies evolved to generate patterns of growth and racial exclusion.

Contributions to Conceptualizing Regional Systems

The *racialized regional dynamics* conceptual frame developed and examined in this thesis helps us interpret regional population changes in a racialized social context. This

conceptual frame is informed by place-based processes of growth and racial exclusion. The data in the case of the Cincinnati Metropolitan area show heterogeneity among places within one region. Literature on housing and institutional legacies of race guided the variables examined in this thesis. This project shifted the scales and perspective on a metropolitan area to view it as a region, with varying place types by size, unique and varying spatial access, and historical contexts and legacies that affect the continuum of places within the region in different ways.

While the case of Cincinnati is unique in many ways, many of its characteristics are common across U.S. regions. The continuum of counties and residences from the city core to rural areas, for example, does not follow strict boundaries as the rural-urban continuum may imply. A county may be caught in the "pull" of a central city, but its local dynamics and especially its place-based history have their own unique contexts.

An analysis of a region like the Cincinnati metro area allows us to uncover divergent trends that are otherwise washed by the regional aggregate. The long-term impacts of development on the spatial contexts of connectivity (i.e., highways) and the physical environment (i.e., housing stock) are the result of dynamic interactions among formal, informal, public, and private institutions. How these factors relate to a city as part of a larger region will vary by place-based practice and "momentum." In particular, local dynamics can be shaped by distance and county size relative to a metropolitan region as a whole. These dynamics shape many facets of life such as housing trends, racial composition, inequality, and social factors.

Every part of the United States has been and is shaped by racial exclusion. However, we can imagine a hypothetical region similar to Cincinnati that exists outside of our racialized society. If there were no ongoing racialized place-based processes, we would expect population proportions in all counties within a region to remain constant. Counties that were 98% white would remain 98% white, migration and settlement patterns would be uniform across racial groups, and economic development strategies would be evenly distributed, as would assets, resources, risks, and needs. Any uneven development would be the result of natural environmental features only, such as natural boundaries, ports, and resources, features that are not inherently racialized. However, the United States is not a non-racial society. My framework contributes to research on regional, metropolitan, and local analyses by including the historical racial dynamics of exclusion along with the incremental impacts and relationships that occur within a heterogenous metropolitan region.

By using this framework of *racialized regional dynamics*, this thesis interrogates the systems that relate to population change, changes in diversity, and spatial dynamics of populations. The impacts of policy and practice are unevenly experienced within a region over time. My findings suggest areas where place-based practices can be further examined for processes of mitigating or amplifying different types of change. I focused on the persistent racial composition of place and how this relates to housing, population growth, and spatial contexts. The patterns of change that emerged indicate that some unique arrangement of forces in local governance, local practice, or private investment may have spurred or stymied local growth.

This project emerged from the question "what happens to a region when a city core experiences a large racialized gentrification project?" The findings suggest that further study should follow the lead of the work of O'Connell (2019) and Crowe (2012) to investigate what happens on the "edges" of regions. Approaches such as Garner's (2017) can examine the dynamics of local historical contexts and an evolving metropolitan system, and how these processes are shaped by practices of racial exclusion (Garner, 2017).

While the work of Loewen (20015), Crowe, and O'Connell analyzed the legacies of racist policies, my work looks at a region as a whole and identifies anomalies within the context of a region using a framework of place-based practices of racial exclusion in the context of a regional system. This approach is place-focused: taking into consideration county characteristics, spatial context, and historical trajectories in the context of peer counties. I find that while most counties shared patterns of change over time, several places took trajectories that were unexpected, even considering their spatial and historical contexts. These findings have implications for planners and development professionals seeking to better understand the needs of small municipalities, villages, towns, and unincorporated areas on the outer edges of a metropolitan area.

Understanding both regional context and practices of racial exclusion improve our understanding of how places change. As we see more interest and growth in medium sized cities in the United States, these non-core counties—perhaps more connected to the rural dynamics of their states—will take on a variety of pathways towards stability, decline, or growth in their changing regional contexts. These population changes will not only have

important impacts for the economic and infrastructure development but will have distinct racialized impacts on where people settle and the nature of their experiences. Further work could investigate the local processes and policies to better understand not just the outcome examined here, but also the processes and contingent contexts of housing demand, developer demand, local political will, and external investments.

Limitations

In this case study, we do not confound the observed heterogeneity in growth patterns as indicative of a universal trend. Indeed, the point of this analysis is to consider how in place and in region, patterns of change are relative and relational. Net migration data by race would provide a new depth on the patterns of movement, however, this paper is focused on the place-based change, while I include some figures on net migration in the appendix, they are not included in the central analysis because of lack of availability of migration data for people of color in the 2000s, those data are important in understanding the exclusionary patterns of the white populations. While data on total and white populations are available, they were not included in this thesis.

Understanding the processes and dynamics that resulted in the housing, highway, and settlement patterns seen here is outside the scope of this thesis. Further investigation might reveal the historical differences in the timing of highway construction along with the socio-political and economic contexts of highway development in the tri-state area in addition to the cities and regions that are connected by these corridors (for other approaches to impact of development, see Avila, 2014; Mele, 2017; Nall, 2015).

While this thesis centers on the historical influence and power of white populations to shape regions, a limitation of this framework is that it does not engage with how people of color shape the landscape. My objective is not to ignore this. Indeed, further work needs to be done to uncover the processes of shaping landscape and resistance by people of color (Lipsitz, 2011; White, 2011). That work in addition to addressing the role of white practices of racial exclusion can generate more balance in the available conceptual approaches to understanding regional population.[8] Populations of people of color in the United States have historically been forcibly moved, removed, or shuffled, through various formal and informal institutional practices. Yet, changes in residential diversity are usually seen as caused by people of color, when in fact practices of exclusion by white population have had long-term and continuing impacts on where all types of people reside. Instead of considering *exposure to diversity* (Lichter et al., 2018), this thesis explores *white dominance* (Lee & Sharp, 2017).

Conclusion

This thesis has examined conceptualizing regional populations changes. Through the conceptual frame of racialized regional dynamics. In doing so, this analysis examines the shaping of place over time by practices-in-place, spatial location, and built

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[8] Furthermore, phrases like "Browning of America," "Diversity Explosion," and "majority minority" connote a white versus "other" scenario with the "other" framed as a threat, even if the analysis is well meaning. This phrasing suggests a passive, powerless default-white population being acted upon, not a population that is dominant part of the global, regional and social processes impacting change. (For example, William Frey's Diversity Explosion: How New Racial Demographics are Remaking America)

environment. These dynamics that occur in-place are certainly inclusive of the legacy effects of racist institutions such as sundown towns and clearly identified practices such as redlining. Yet the conceptualization of region is more broadly inclusive of the covert and long-term impacts of more subtle development—or non-development—practices that have quietly shaped the built and social environment in place. This divergent development creates or blocks opportunities for what Benner and Pastor would call shared epistemologies that can impact the development of regional growth and equity (2015a) and extends Lobao's localization of regional processes and focus on ordinary settings (2004).

This work bridges how we conceptualize place-based analyses of exclusion with regional population changes by using persistence of whiteness as an indicator of legacy effects. This thesis adds nuance to frameworks employed by other studies through reading the spatial landscape and interpreting where population change may be influenced by historical artifacts. Future work can build from this type of conceptualization of place to analyze the processes in places that appear to resist or persist practices of racial exclusion. Furthermore, scholars can dig deeper into place-based heterogeneity to understand the particularities of how legacies persist. These place-based processes can yield variables to include in larger spatial-statistical studies and can also shed light on the racialized impacts of place-based practices.

Works Cited

2010 TIGER/Line Shapefiles [machine-readable data files]/prepared by the U.S. Census Bureau. (2012).

Abascal, M., & Baldassarri, D. (2015). Love Thy Neighbor? Ethnoracial Diversity and Trust Reexamined. *American Journal of Sociology*, *121*(3), 722–782. https://doi.org/10.1086/683144

ABOUT | 3CDC. (n.d.). Retrieved May 2, 2020, from https://www.3cdc.org/about-3cdc/

Alkon, A. H., & Traugot, M. (2008). Place matters, but how? rural identity, environmental decision making, and the social construction of place. *City and Community*, *7*(2), 97–112. https://doi.org/10.1111/j.1540-6040.2008.00248.x

Alter, M. (2014). Washington Park Then and Now: How a troubled park became the centerpiece of a city - WCPO Cincinnati, OH. Retrieved from http://www.wcpo.com/about-us/history/washington-park-then-now-the-transformation-of-washington-park?page=2

Avila, E. (2014). L.A.'s Invisible Freeway Revolt. *Journal of Urban History*, *40*(5), 831–842. https://doi.org/10.1177/0096144214536857

Benner, C., & Pastor, M. (2015a). *Equity, Growth, and Community* (First). Oakland: University of California Press. https://doi.org/http://dx.doi.org/10.1525/luminos.6

Benner, C., & Pastor, M. (2015b). *Equity , Growth , and Community: What the Nation Can Learn From America's Metro Areas*. Oakland, California: Univeristy of California Press. Retrieved from http://www.luminosoa.org/site/books/detail/5/equity-growth-and-community/

Benner, C., & Pastor, M. (2016). Whither resilient regions? Equity, growth and community. *Journal of Urban Affairs*, *38*(1), 5–24. https://doi.org/10.1111/juaf.12194

Berry, B. (2008). Dimensions of Segregation and Inequality : A critical review and redirection. In T. Zuberi & E. Bonilla-Silva (Eds.), *White logic, white methods: Racism and methodology*. Lanham: Rowman & Littlefield Publishers. https://doi.org/9780742542808

Billingham, C. M., & Kimelberg, S. M. (2013). Middle-class parents, urban schooling, and the shift from consumption to production of urban space. *Sociological Forum*, *28*(1), 85–108. https://doi.org/10.1111/socf.12004

Blomley, N. (2011). Thinking like an engineer. In *RIGHTS OF PASSAGE: SIDEWALKS AND THE REGULATION OF PUBLIC FLOW* (p. 29+).

Blomley, N. K. (2011). *Rights of passage : sidewalks and the regulation of public flow*. New York: Routledge. Retrieved from https://www-worldcat-org.ezproxy.library.wisc.edu/title/rights-of-passage-sidewalks-and-the-regulation-of-public-flow/oclc/939172206&referer=brief_results

Bonilla-Silva, E., & Zuberi, T. (Eds.). (2008). *White Logic, White Methods: Racism and Methodology*. Rowan & Littlefield Publishers.

Coates, T.-N. (2014, June). The Case for Reparations. *The Atlantic*. https://doi.org/10.1177/004057366902600305

Cohen, J. (2016). New Cincinnati Streetcar Meets Ridership Estimates in First Week.

Retrieved October 7, 2019, from https://nextcity.org/daily/entry/cincinnati-streetcar-opens

Covington, K. L. (2018). Overcoming Spatial Mismatch: The Opportunities and Limits of Transit Mode in Addressing the Black-White Unemployment Gap. *City and Community*, *17*(1), 211–235. https://doi.org/10.1111/cico.12278

Crowder, K., Pais, J., & South, S. J. (2012). Neighborhood Diversity, Metropolitan Constraints, and Household Migration. *American Sociological Review*, *77*(3), 325–353. https://doi.org/10.1177/0003122412441791

Crowe, J. (2012). The influence of racial histories on economic development strategies. *Ethnic and Racial Studies*, *35*(11), 1955–1073. https://doi.org/10.1080/01419870.2011.611891

Curtis, K. J., Lee, J., O'Connell, H. A., & Zhu, J. (2019). The Spatial Distribution of Poverty and the Long Reach of the Industrial Makeup of Places: New Evidence on Spatial and Temporal Regimes. *Rural Sociology*, *84*(1), 28–65. https://doi.org/10.1111/ruso.12216

Curtis, K. J., & O'Connell, H. A. (2017). Historical Racial Contexts and Contemporary Spatial Differences in Racial Inequality. *Spatial Demography*, *5*(2), 73–97. https://doi.org/10.1007/s40980-016-0020-x

Dovey, R. (2017). Cincinnati Streetcar's First Birthday Isn't All Cake and Streamers. Retrieved July 10, 2019, from https://nextcity.org/daily/entry/cincinnati-streetcar-one-year-impact

Dreier, P., Mollenkopf, J. H., & Swanstrom, T. (2014). *Place Matters: metropolitics for the twenty -first century* (3rd ed.). Lawrence: University Press of Kansas.

Elliott, J. R., & Smiley, K. T. (2019). Place, Space, and Racially Unequal Exposure to Pollution at Home and Work, *6*(1), 32–50. https://doi.org/10.1177/2329496517704873

Farmer, J. L. (2018). Connecting Theory With Practice: The Institutional Evolvement of U.S. Counties Functioning as Regional Service Providers. *American Review of Public Administration*, *48*(8), 808–821. https://doi.org/10.1177/0275074017730399

Fernandez, R. M., & Su, C. (2004). Space in the Study of Labor Markets. *Annual Review of Sociology*, *30*(1), 545–569. https://doi.org/10.1146/annurev.soc.29.010202.100034

Foote, K. E. (2003). *Shadowed ground: America's landscapes of violence and tragedy, revised and updated*. *Shadowed Ground: America's Landscapes of Violence and Tragedy, revised and updated* (1st ed.). Austin: University of Texas Press. Retrieved from https://utpress.utexas.edu/books/foos2p

Fowler, C. S., Lee, B. A., & Matthews, S. A. (2016). The Contributions of Places to Metropolitan Ethnoracial Diversity and Segregation: Decomposing Change Across Space and Time. *Demography*, *53*(6), 1955–1977. https://doi.org/10.1007/s13524-016-0517-3

Fowler, C. S., Rhubart, D. C., & Jensen, L. (2016). Reassessing and Revising Commuting Zones for 2010: History, Assessment, and Updates for U.S. 'Labor-Sheds' 1990–2010. *Population Research and Policy Review*, *35*(2), 263–286. https://doi.org/10.1007/s11113-016-9386-0

Garner, B. (2017). "Perfectly Positioned": The Blurring of Urban, Suburban, and Rural Boundaries in a Southern Community. *Annals of the American Academy of Political and Social Science*. https://doi.org/10.1177/0002716217710490

Greenblatt, A. (2014). From Vacant to Vibrant: Cincinnati's Urban Transformation. Retrieved December 15, 2017, from http://www.governing.com/topics/urban/gov-cincinnati-urban-transformation.html

Grigoryeva, A., & Ruef, M. (2015). The Historical Demography of Racial Segregation. *American Sociological Review*, *80*(4), 814–842. https://doi.org/10.1177/0003122415589170

Hayden, D. (1997). Place Memory and Urban Preservation. In *The Power of Place: Urban Landscapes as Public History*. Cambridge: The MIT Press.

Johnson, K. M., Curtis, K. J., & Egan-Robertson, D. (2017). Frozen in Place: Net Migration in sub-National Areas of the United States in the Era of the Great Recession. *Population and Development Review*. https://doi.org/10.1111/padr.12095

La Botz, D. (2008). *Who Rules Cincinnati? A Study of Cincinnati's Economic Power Structure And its Impact on Communities and People*. Cincinnati. Retrieved from www.cincinnatistudies.org

Lee, B. A., & Sharp, G. (2017). Ethnoracial Diversity across the Rural-Urban Continuum. *Annals of the American Academy of Political and Social Science*, *672*(1), 26–45. https://doi.org/10.1177/0002716217708560

Lichter, D. T., Parisi, D., & Taquino, M. C. (2015). Toward a New Macro-Segregation? Decomposing Segregation within and between Metropolitan Cities and Suburbs. *American Sociological Review*, *80*(4), 843–873. https://doi.org/10.1177/0003122415588558

Lichter, D. T., Parisi, D., & Taquino, M. C. (2018). White Integration or Segregation? The Racial and Ethnic Transformation of Rural and Small Town America. *City and Community*, *17*(3), 702–719. https://doi.org/10.1111/cico.12314

Lichter, D. T., & Ziliak, J. P. (2017). The Rural-Urban Interface: New Patterns of Spatial Interdependence and Inequality in America. *Annals of the American Academy of Political and Social Science*, *672*(1), 6–25. https://doi.org/10.1177/0002716217714180

Liebing, B. (2015, April 10). City Gospel Mission, 3CDC partner for new facility. *Cincinnati.Com*. Retrieved from https://www.cincinnati.com/story/news/2015/04/10/city-gospel-mission-cdc-partner-new-facility/25258251/

Linz, J. D. (2017). Inhabiting the impasse: Social exclusion through visible assemblage in neighborhood gentrification. *Geoforum*, *85*(June), 131–139. https://doi.org/10.1016/j.geoforum.2017.06.023

Lipsitz, G. (2007). The Racialization of Space and the Spatialization of Race: Theorizing the Hidden Architecture of Landscape. *Landscape Journal*, *26*(1), 10–23. https://doi.org/10.3368/lj.26.1.10

Lipsitz, George. (2011). *How Racism Takes Place*. Philadelphia, PA: Temple Univeristy Press.
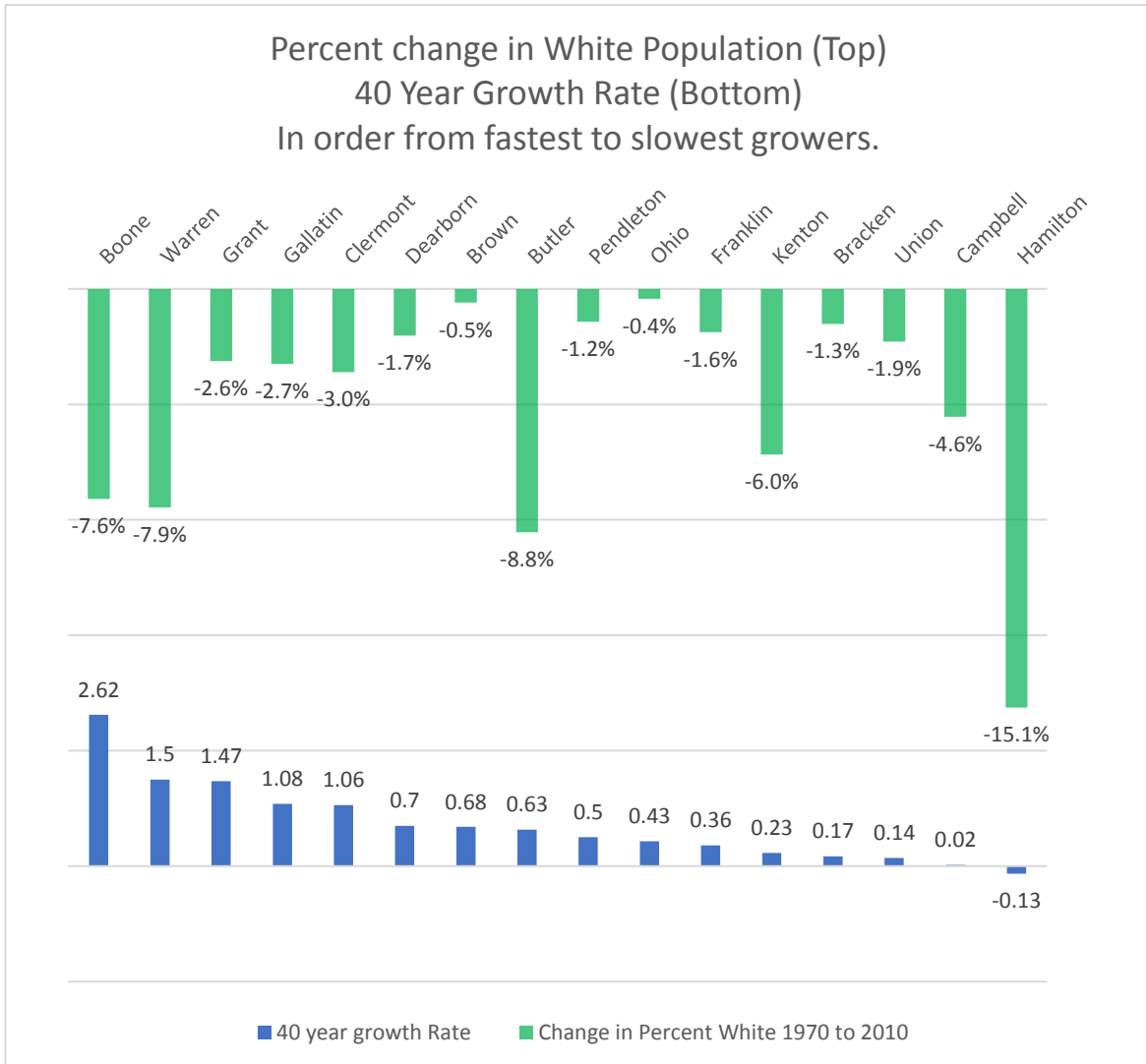
Lobao, L. (2004). Continuity and change in place stratification: Spatial inequality and middle-range territorial units. *Rural Sociology*, *69*(1), 1–30. https://doi.org/10.1526/003601104322919883

Loewen, J. W. (2005). *Sundown Towns A Hidden Dimension of American Racism* (First Touc). Touchstone. https://doi.org/10.1093/acref/9780195301731.013.46251

Loewen, J. W. (2009). Sundown Towns and Counties: Racial Exclusion in the South. *Southern Cultures*, *15*(1), 22–47. https://doi.org/10.1353/scu.0.0044

Logan, J. R. (2013). The Persistence of Segregation in the 21st Century Metropolis. *City and Community*, *12*(2), 160–168. https://doi.org/10.1111/cico.12021

Manson, S., Schroeder, J., Van Riper, D., & Ruggles, S. (2019). IPUMS National Historical Geographic Information System: Version 14.0 [Database]. Minnneapolis, MN: IPUMS. https://doi.org/http://doi.org/10.18128/D050.V14.0

Massey, D. (1994). General Introductions. In *Space, Place, and Gender* (pp. 1–16). Minneapolis: University of Minnesota Press. https://doi.org/10.3138/jsp.40.4.399

Massey, D. S. (2016). Residential Segregation is the Linchpin of Racial Stratification. *City and Community*, *15*(1). https://doi.org/10.1111/cico.12145

Massey, D. S., & Denton, N. A. (1988). *The Dimensions of Residential Segregation* (Vol. 67). Retrieved from https://www.jstor.org/stable/pdf/2579183.pdf?refreqid=excelsior%3A13fae2a814955 1e4ad4a103f03206c43

Massey, D. S., & Denton, N. A. (1998). *American Apartheid: segregation and the making of the underclass*. Harvard University Press. https://doi.org/9780674018211, 0674018214

Mele, C. (2017). *Race and Politics of Deception. The Making of an American City*. NYU Press. Retrieved from https://nyupress.org/books/9781479880430/

Molotch, H., Freudenburg, W., & Paulsen, K. E. (2000). History Repeats Itself , But How? City Character, Urban Tradition, and the Accomplishment of Place. *American Sociological Review*, *65*(6), 791–823.

Monnat, S. M., & Beeler Pickett, C. (2011). Rural/urban differences in self-rated health: Examining the roles of county size and metropolitan adjacency. *Health and Place*, *17*(1), 311–319. https://doi.org/10.1016/j.healthplace.2010.11.008

Nall, C. (2015). The Political Consequences of Spatial Policies: How Interstate Highways Facilitated Geographic Polarization. *The Journal of Politics*. https://doi.org/10.1086/679597

Neely, B., & Samura, M. (2011). Social geographies of race: Connecting race and space. *Ethnic and Racial Studies*, *34*(11), 1933–1952. https://doi.org/10.1080/01419870.2011.559262

Norgaard, K. M., Reed, R., & Van Horn, C. (2011). A Continuing Legacy: Institutional Racism, Hunger, and Nutritional Justice on the Klamath. In A. H. Alkon & J. Agyeman (Eds.), *Cultivating Food Justice Race, Class, and Sustainability* (pp. 23–46). MIT Press.

O'Connell, H. A. (2019). Historical Shadows: The Links between Sundown Towns and Contemporary Black–White Inequality. *Sociology of Race and Ethnicity*, *5*(3), 311–

325. https://doi.org/10.1177/2332649218761979

Pais, J. (2017). Intergenerational Neighborhood Attainment and the Legacy of Racial Residential Segregation: A Causal Mediation Analysis. *Demography*, *54*(4), 1221–1250. https://doi.org/10.1007/s13524-017-0597-8

Paulsen, K. E. (2004). Making Character Concrete: Empirical Strategies for Studying Place Distinction. *City and Community*. https://doi.org/10.1111/j.1535-6841.2004.00080.x

Petracco, B. (2014, August). City Gospel Mission begins construction on new homeless rehab campus. *WLWT*. Retrieved from http://www.wlwt.com/article/city-gospel-mission-begins-construction-on-new-homeless-rehab-campus/3545657

Porter, J. R., & Howell, F. M. (2012). Roots of Space in Sociology: Community Sociology at the Wisconsin and Chicago Schools (pp. 25–33). https://doi.org/10.1007/978-94-007-3849-2_3

Quillian, L. (2012). Segregation and Poverty Concentration: The Role of Three Segregations. *Source: American Sociological Review*, *77*(3), 354–379. https://doi.org/10.1177/0003122412447793

Ray, V. (2019). A Theory of Racialized Organizations. *American Sociological Review*, *84*(1), 26–53. https://doi.org/10.1177/0003122418822335

Reardon, S. F., Matthews, S. A., O'Sullivan, D., Lee, B. A., Firebaugh, G., Farrell, C. R., & Bischoff, K. (2008). The geographic scale of metropolitan racial segregation. *Demography*, *45*(3), 489–514. https://doi.org/10.1353/dem.0.0019

Reece, R. L., & O'Connell, H. A. (2016). How the Legacy of Slavery and Racial Composition Shape Public School Enrollment in the American South. *Sociology of Race and Ethnicity*, *2*(1), 42–57. https://doi.org/10.1177/2332649215582251

Salamon, S. (2003). *Newcomers to old towns : suburbanization of the heartland*.

Sharkey, P. (2008). The intergenerational transmission of context. *American Journal of Sociology*, *113*(4), 931–969. https://doi.org/10.1086/522804

Sharkey, P. (2013). *Stuck in place : urban neighborhoods and the end of progress toward racial equality*. The University of Chicago Press.

Sharkey, P., & Faber, J. W. (2014). Where, When, Why, and For Whom Do Residential Contexts Matter? Moving Away from the Dichotomous Understanding of Neighborhood Effects. *Annual Review of Sociology*, *40*(1), 559–579. https://doi.org/10.1146/annurev-soc-071913-043350

Simmel, G. (1964). The Metropolis and Mental Life. In *The Sociology of Georg Simmel* (pp. 409–424). Free Press of Glencoe.

Smith, R. (2005). 3CDC in Over-the-Rhine: Between Two Worlds - Cincinnati Magazine. Retrieved November 10, 2017, from http://www.cincinnatimagazine.com/citywiseblog/3cdc-in-over-the-rhine-between-two-worlds/

Stewart, Q. T. (2008). Swimming Upstream Theoryand Methodology in Race Research Ch6. In T. Zuberi & E. Bonilla-Silva (Eds.), *White logic, white methods: Racism and methodology*.

Stradling, D. (2003). *Cincinnati : from river city to highway metropolis*. Arcadia.

Sutton, S. (2018). Gentrification and the Increasing Significance of Racial Transition in

New York City 1970–2010, (Mc 348), 1–31.
https://doi.org/10.1177/1078087418771224

Swanstrom, T., Dreier, P., & Mollenkopf, J. (2002). Economic Inequality and Public Policy: The Power of Place. *Cities and Community*, *1*(4), 349–372. https://doi.org/10.1111/1540-6040.00030

Thompson, J. P. (2016). Place Matters, and So Does Race. *Urban Affairs Review*, 1078087416633876. https://doi.org/10.1177/1078087416633876

Tweh, B. (2014). "Long, slow" process yields new City Gospel Mission. *Cincinnati.Com*. Retrieved from https://www.cincinnati.com/story/money/2014/08/14/city-gospel-mission-ceremony/14049949/

U.S. Census Bureau. (n.d.). U.S. Census Bureau QuickFacts: Cincinnati city, Ohio. Retrieved August 23, 2020, from https://www.census.gov/quickfacts/fact/table/cincinnaticityohio/INC110218

White, M. M. (2011). Sisters of the Soil : Urban Gardening as Resistance in Detroit. *Race/Ethnicity: Multidisciplinary Global Contexts*, *5*(1), 13–28. https://doi.org/10.2979/racethmulglocon.5.1.13

Woodward, C. (2016). How Cincinnati Salvaged the Nation's Most Dangerous Neighborhood - POLITICO Magazine. *Politico*. Retrieved from https://www.politico.com/magazine/story/2016/06/what-works-cincinnati-ohio-over-the-rhine-crime-neighborhood-turnaround-city-urban-revitalization-213969

Appendix 1

Figure 10: Hanging Chart Blue and Green, % Change in White Population and County Growth Rates

Percent change in White Population (Top)
40 Year Growth Rate (Bottom)
In order from fastest to slowest growers.

■ 40 year growth Rate   ■ Change in Percent White 1970 to 2010

Appendix 2

Net Migration

Net migration data for counties originated from the Applied Population Laboratory (citation) and was merged with NHGIS population data and 2010 Census Tiger Files for county level analysis using the geoids—unique codes for each county. These counties did not have boundary changes during this period; however, Union County and Franklin County in Indiana did swap in and out of the MSA with new designations in 2007. Franklin County became part of the MSA, and Union County was removed. Though Union was removed, and Franklin was not always included, both were included in this analysis to show the changes over time in the areas that now make up the Cincinnati MSA. The counties in the MSA all have changed, grown and altered their relationship to the city core and, thus, are important to the system of people and populations that compose Cincinnati today.

Net migration data show that Small, Medium, and Large counties all had exceptional cases with negative migration rates. Combined with the growth rates and housing stability, these data reinforce the central findings. While I do not have net migration data for all races in each decade, these data are able to explain the rapid growth of Boone and also inform how large counties like Campbell and Kenton managed to maintain stable population sizes. Net migration rates for white populations are in Table 7.

Data from Winkler, Richelle, Kenneth M. Johnson, Cheng Cheng, Jim Beaudoin, Paul R. Voss, and Katherine J. Curtis. Age-Specific Net Migration Estimates for US Counties,

1950-2010. Applied Population Laboratory, University of Wisconsin - Madison, 2013.
Web. [1-24-2019.] https://netmigration.wisc.edu/.
Table 7 Net Migration Rates by Decade

Size Category	County	1960s	1970s	1980s	1990s	2000s	Average Across Decades
Small	Gallatin, KY	-1.3	11.0	6.9	33.8	3.0	10.7
	Ohio, IN	-3.4	13.7	0.0	2.7	7.0	4.0
	Union, IN	-5.2	-3.6	-1.3	1.5	-1.0	-1.9
	Bracken, KY	-7.0	3.7	0.6	2.6	0.0	0.0
	Pendleton, KY	-7.0	6.0	5.6	12.3	0.0	3.4
	Grant, KY	-1.1	24.2	13.0	28.8	0.0	13.0
Medium	Franklin, IN	-8.5	5.0	-6.2	6.3	0.0	-0.7
	Brown, OH	-1.4	10.6	3.3	13.5	2.0	5.6
	Dearborn, IN	-6.5	9.3	7.4	11.0	2.0	4.6
	Boone, KY	26.6	21.5	12.9	32.0	23.0	23.2
	Warren, OH	11.1	4.2	6.0	25.9	23.0	14.0
	Campbell, KY	-7.4	-11.8	-3.9	-1.4	-1.0	-5.1
	Clermont, OH	3.3	18.5	5.2	7.1	2.0	7.2
	Kenton, KY	-3.6	-2.0	-2.9	-2.2	-1.0	-2.3
	Butler, OH	0.5	3.4	4.9	5.5	4.0	3.7
Core	Hamilton, OH	-4.2	-11.8	-6.3	-8.5	-8.0	-7.8

Table 8 Net Migration for White Populations (Missing 1980s)

Size Category	County	1960s	1970s	1990s	2000s
Core	Hamilton County	-5.2	-14.5	-11.9	-12
Large	Butler County	0.8	3.6	2.5	-1
Large	Campbell (KY)	-7.4	-11.9	-2.9	-3
Large	Clermont County	3.4	18.5	5.8	1
Large	Kenton County	-3.4	-2.1	-4.2	-4
Large	Warren County	10.8	3.8	23	17
Med	Boone County	26.7	21.3	27.7	19
Med	Brown County	-1.3	11.1	12.9	2
Med	Dearborn County	-6.5	9.1	10.2	1
Med	Franklin County	-8.5	4.9	5.9	0
Small	Bracken County	-7.2	3.8	1.9	-1
Small	Gallatin County	-1.1	11.1	32.4	1
Small	Grant County	-1.3	24.6	27	0
Small	Ohio County	-3.7	14.1	2.5	6
Small	Pendleton County	-6.7	6.2	11.4	0
Small	Union County	-4.7	-3.6	1.4	-2