RELEASING INTO CONFLICT ZONES: EXPLORING THE SPATIAL DRIVERS OF URBAN INSECURITY AND ITS IMPACT ON THE REENTRY OF OFFENDERS IN NEW ORLEANS

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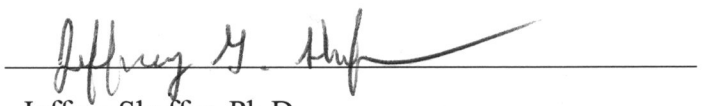FOR THE DEGREE

OF

DOCTOR OF PHILOSOPHY

BY

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LIST OF ABBREVIATIONS

ACS   American Community Survey
CFA   Common Factor Analysis
CPI   Crime Prevention Initiative
FA   Factor Analysis
ICRC   International Committee of the Red Cross
HIC   High Income Countries
LISA   Local Indices of Spatial Autocorrelation
LMIC   Low and Middle Income Countries
LA DPS&C   Louisiana Department of Safety and Correction
PCA   Principal Components Analysis
P&P   Probation and Parole
PO   Parole Office
UNODC   United Nation Office of Drugs and Crime

ABSTRACT

The overall goal of the proposed research was to explore the dimensions of Urban Insecurity and to provide policy-makers with insight into the dynamic and complex situations of a vulnerable population living in insecure urban environments. Within development studies, urban insecurity is regarded as the converse of urban security – i.e., reasonable and sustained access to food, shelter, water, employment and personal and community safety. Poor people are disproportionately predisposed to insecure situations as they migrate to, or reside within, urban areas, in order to secure a livelihood, and instead find themselves concentrated in areas of intense poverty, often coupled with social and political marginalization (Moser et al., 2006). These areas are also plagued by structural inequity, where large systemic disparities exist, such as access to quality education and medium to high wage job opportunities (Braveman et al, 2003).

Insecurity both generates, and is generated by, poverty, inequity, crime and violence within affected environments (Peres et al., 2012; Thomas et al., 2006). The overarching goal of this research was to test the underlying presence of varying concentrations of disadvantage, including poverty, crime and violence, on the production of an insecure environment, and, in turn, to examine the impact of such an environment on a vulnerable population. The specific aims of this study were to: **1)** explore the drivers of Urban Insecurity, **2)** understand the patterns of Urban Insecurity using spatial analysis, and **3)** understand the impact of Urban Insecurity on affected individuals, specifically those vulnerable to exposure to varying levels of inequality, poverty, crime (as concentration of illegal activities) and violence (as concentration of crimes involving physical harm). The

vulnerable population selected consist of returning offenders who were charged with a drug crime, gun crime or violent crime and were released either into court-mandated probation or released from jail or prison into corrections-mandated Parole supervision. This population is especially sensitive to the presence of Urban Insecurity, as, with the conditions of Probation & Parole (P&P) supervision, they are required to secure stable housing, employment, avoid illegal activities and pay restitution for their crime. This occurs all within the context of returning into the community without financial resources, with historically poor educational attainment and a reputation as a convicted criminal (Miller et al, 2015; Ostermann, 2015).

Using ecological data from the American Community Survey of the U.S. Census, this research proposed a spatial analysis of three hypothesized drivers of Urban Insecurity: Concentrated Disadvantage, Social Disorganization and Structural Inequality. An Index of Urban Insecurity was developed from indicators known in previous literature to explain these three constructs in order to reflect additional relationships established in Urban Insecurity literature. Several novel indicators related to the three aforementioned constructs were proposed based on the specific historical contexts of New Orleans. The collection of indicators was subjected to a Common Factor Analysis (CFA) followed by internal consistency reliability testing. The spatial patterning of Urban Insecurity was then examined for significant spatial clustering and variability across Orleans Parish Block groups for the City of New Orleans.

In order to test the impact of Urban Insecurity, individual-level offender data gathered from a Bureau of Justice Assistance Second Chance Act grant-funded Crime

Prevention Initiative (CPI) was utilized. The CPI project initially ran from January 1, 2012 to April 1, 2014, and was aimed at preventing negative reentry outcomes by improving P&P quality and quantity. Offenders released from prison, jail or into supervision are expected to reintegrate successfully into society, but the formal reentry process rarely takes into account the extent of individual vulnerabilities (illiteracy, chronic poverty) or the presence or magnitude of Urban Insecurity in the areas of release (Davis, 2014; Morenoff et al., 2014).

P&P supervision is meant to decrease revocation and return to prison by assisting the reentry process with a platform for offender accountability regarding employment, substance abuse and general stability that is believed to prevent the re-commission of crime (Miller et al., 2015; Phelps, 2013). The hypothesis of the proposed research was that Urban Insecurity will have a significant impact on the offenders' ability to thrive in a post-release setting, overwhelming the efforts of Probation and Parole supervision. This was tested utilizing the mapped Urban Insecurity Index for a comparison of outcomes important to the reentry process, looking across differing intensities of insecurity at the location of release. Positive reentry outcomes include successful connections to steady living arrangements, continued employment and cessation of drug use and criminal behaviors (Cobbina, 2010; Phelps, 2013). Negative reentry outcomes include probation and parole violations, failed drug tests, arrests, being charged with a crime and revocation. Revocation, the primary outcome of interest, will be examined in a multilevel format, as individuals nested within microenvironments, measured by the smallest level of aggregation available through the Census: block groups (Gorman et al, 2001; Sampson et

al., 1997; Speer, et al., 1998). Finally, it is hypothesized that Urban Insecurity will have a moderating effect on the factors that affect reentry. Urban Insecurity was presumed to have a negative effect on factors protective to reentry such as PO contacts and employment, and were presumed to have a positive (or enhancing effect) on threatening factors such as drug use and criminal history. The overall premise of this study is that the risks presented in areas of moderately high and high Urban Insecurity will overwhelm both standard and intensive reentry efforts in the prevention of revocation.

CHAPTER 1: INTRODUCTION

1.1 Urban Insecurity Literature Review

1.1.1 Defining Urban Insecurity

Urban growth is an area of crucial concern as 600 cities produce 60% of the global gross domestic product and nearly 60% of the global population live in urban centers (Nations & Settlements, 2011). Urban Insecurity consequently is an emerging issue of mounting concern. One principal issue with growing urban centers is that population growth occurs primarily within low-income areas (slums), as people leave rural livelihoods for perceived improvements in jobs and resources (Claggion, 2008; Collinson, et al., 2010). Urban Security relates to reasonable access in urban areas to food, shelter, water, personal and community safety. On the other hand, Urban Insecurity is typically regarded as its converse and references a constant competition for available limited resources in cities not originally planned for the nature of rapid expansion (ICRC, et al 2007). For the resource-poor, coming to or living in the urban center to extract labor and resources, many are forced to 'self-select' residential areas that are suffering from marginalization, under-institutionalization, pronounced inequity and in many cases violence (Williams, 2009).

With the extensive influence of globalization implicit within most urban economies, the success of a city is rarely transmitted equitably across existing and burgeoning populations (Gutierrez, et al., 2013). Resources are less oriented to equitable urban growth, but, rather, to profit maximization (Blattman, 2015; Williams, 2009). The severity of this issue is felt most deeply in Low and Middle Income Countries (LMICs), where increasing velocities

of emigration to urban centers (planned for a fraction of their current and expected population) concentrate people into immense slums, i.e. Lagos, Dhaka, Mumbai, Karachi (Davis, 2012). Populations that are vulnerable to marginalization regarding access to jobs, food, water, safety and livelihoods sometimes generate illicit means to survive (Blattman, 2015).

While Urban Insecurity in LMICs is most often tied to the advent of rapid urbanization, many of the primary drivers of Urban Insecurity are present in High Income Countries (HICs) as well, though they are rarely perceived or labeled with terms associated with insecurity (UNODC, 2013). Just as with LMIC Urban Insecurity, these same areas in HICs experience profound inequity, marginalization, under-institutionalization, and extraordinary violence (Claggion, 2008; Davis, 2014; Pryor, 2010; Purcell, 2007). These pockets of insecurity exist alongside areas of security and are not easily perceived across aggregate measures such as census tracks, counties and districts (Addicott et al., 1346; Banfield, et al., 2005). Moreover, these areas tend to concentrate among racial or ethnic minorities (Braveman et al., 2003; Massey, 1990; Vyas et al., 2006)

1.1.3 Macro to Micro Drivers of Urban Insecurity

Dynamic and multidimensional factors precede Urban Insecurity, with the fundamental driver being inequity of resources, such as access to jobs, housing, food and education (Morenoff et al., 2001; Muggah, 2012; Peres et al., 2012; Ribetti, 2002). Research across

settings distills the factors driving Urban Insecurity at different levels: macro, mezzo and micro. These levels are relatable using two seemingly divergent theoretical constructs, specifically the socioecological model by Bronfenbrenner in his work on Ecological Models of Human Development, and the Sustainable Livelihoods Framework, developed by United Kingdom's (UK) Department for International Development (Bronfenbrenner, 1994; DFID, 1999). While the Sustainable Livelihoods Framework speaks to the dynamic interplay between capital and wealth (i.e. human, natural, social, physical and financial), it specifies potential shocks and trends that assist or limit the ability for individuals to create a livelihood. These shocks can be transformed by larger societal structures and processes that tend toward protection and inclusion or exclusion and neglect (Alinovi et al., 2010; Brock, 1999; Fenton et al., 2010). When small and large systems interact, the result is a dynamic movement of access or scarcity contextualized to the resources of a specified area (LMIC, HIC, rural, urban, etc.) and any combination of circumstances therein (Alkire, et al., 2012). For example, a bean farmer with three acres of land and two goats would be considered poor in America, while, in Zambia, the same circumstances would imply wealth. This construct frames our journey from the 'macro to the micro' in a general sense.

Just as the Sustainable Livelihoods Framework allows for complex economic, sociological and physical mechanisms to interact within a community of interest, Bronfenbrenner's socioecological model flows downward to more closely specify the individual and the microsystems he or she encounter that directly affect daily development. Overall, the model illustrates the interrelation of five levels important to the development of people,

though the literature originally focused on children. The levels include microsystems, mesosystems, macrosystems, exosystems and chronosystems (Bronfenbrenner, 1994). In brief, microsystems refer to groups and institutions directly affecting the individual: family, peers, and neighborhoods. As these systems interrelate, they generate the mesosystems, which may arguably have the most persistent effect on the individual due to their capacity for creation of culture. Exosystems are less explicit, though heavily influential, referring to the interrelation, but not the interaction, of mesosystems. This is the space from which concepts such as anomie may theoretically derive, as people see (or do not see) other people's realities, struggles or points of view, allowing for social isolation and dislocation. The macrosystem relates the overall cultural context and societal base the individual ascribes to and identifies with, including Socio-Economic Status, ethnicity, rural/urban, LMIC, etc. The following section will flow from the larger national/societal macro level drivers of urban insecurity to the community/individual level drivers implicit within macrosystem to microsystem-level drivers of insecurity.

At the national level, profound inequality at structural, infrastructural and institutional levels appear to be accelerated by globalization, neoliberalism and imbalanced macroeconomic policies, which produce political structures that are unwilling or unable to spread wealth (Davis, 2012). This is primarily reflected as an observed **failure of *perceived* and *functional* political legitimacy**, wherein governmental and political actors act outside of the role of 'guarantor of public service… and public interests' (Bourdieu, 1990). At a macro-structural level, the mismatch between state assets and the use of those assets for

collective well-being could be attributed to weak or corrupt governments (Banfield et al., 2005; Lamb, 2010; Walker et al., 2002). The impact of **a weak economy** is the inability to generate employment or sustainable means of a livelihood. A critical mass of unemployment and non-wage earners further destabilizes areas with dense populations (Uchida et al., 2014; UNODC, 2013).

In these cases, disparity and concentrations of poverty are bound to occur and concentrate among a population, such as the situation that occurs when urban growth does not match urban development (Mason, 2010). The increase in population density occurs so rapidly, urban infrastructure is overwhelmed and the overflow become 'the enemy' (Kijewski-Correa et al., 2011; Robert Muggah, 2015). Systemic marginalization follows, which has been shown to accelerate rapid demographic and economic changes among isolated populations. The interaction of exosystems and mesosystems in the context of inequity and inequality creates a chronicity of negative effects upon youth, particularly when they involve violence or disorder (Langes, 2012). This interplay between individuals and socioecological systems in an environment of Urban Insecurity creates a functional segregation of societies, a dual reality where inequity precedes changes in society that have the potential to generate more insecurity (Purcell, 2007; Vilalta et al, 2014).

Another commonality of insecure areas is the **Human Rights violation,** by the police force or other bodies intended to maintain control, often in lieu of intensive equity programming among vulnerable populations (Peres et al., 2012). Increased funding of the police force,

military and paramilitary to manage strained populations where there are signs of increasing crime is not an unusual strategy, but essentially ignores the root drivers of crime among marginalized populations (Horgan et al., 2010; Pryor, 2010). Moreover, a weak or untrustworthy security force might drive up the amount of violence, homicide and trauma experienced in an area. Excessive force easily transforms into Human Rights violations, and even unquestioned and unjustifiable homicide by police forces against the ubiquitous 'enemy' of the disempowered poor (Davis, 2012; Muggah et al., 2015; Peres et al., 2012). An excellent example is the 'Special Police Operations Battalion of the Rio de Janeiro Military Police,' active in favelas in Brazil, and the recent Black Lives Matter movement protesting inhumane police force. This loss of legitimacy and confidence in the security-keeping force leads to a variety of 'Self-Help' behaviors, where residents learn to avoid the police force all together and dispense 'justice' according to their own values (Berg et al., 2009; Kubrin, 2005). This loss of confidence extends to the judicial structures (courts, judges, jails), wherein those being punished, and punished most severely, are often among the most marginalized populations (Moser et al., 2006).

Figure 1:
Conceptual Framework for the Macro, Mezzo and Micro Drivers of Urban Insecurity and Impact on Individual Outcomes

MACRO

WEAK GOVERNANCE/POLICY

WEAK ECONOMY

MEZZO

INEQUITY/ INEQUALITY

HUMAN RIGHTS VIOLATIONS

MICRO (COMMUNITY)

URBAN INSECURITY

STRUCTURAL INEQUALITY

SOCIAL DISORDER/DISORG

TYPES OF POVERTY

INDIVIDUAL

INSECURITY-RELATED VULNERABILITY

REENTRY

REPEATED CRIMINAL ACTIONS & ARRESTS
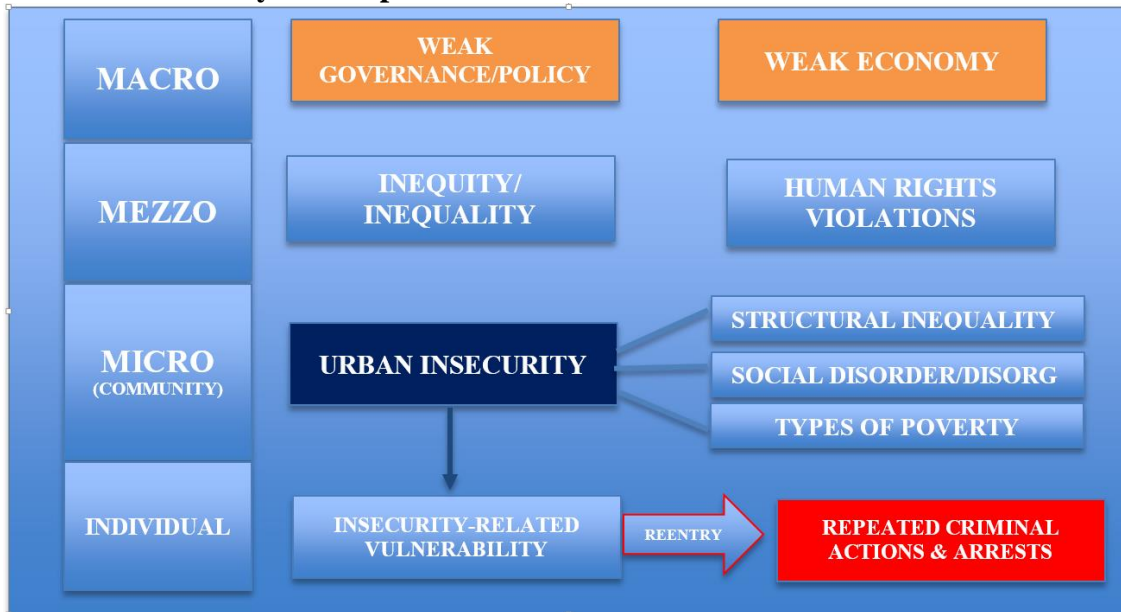
Micro and Individual Level Interactions with Urban Insecurity

As communities evolve or devolve into urban areas of marginalization, a cyclical mechanism of isolation emerges within microenvironments, or areas where disparity concentrates (Sampson et al., 1997). Areas developing insecurity are abandoned by wealthier residents, businesses and institutions (Justice, 2009). This impacts the access to (and judicious use of) a tax base for social services, education and public safety (Banfield et al., 2005). The mechanisms of inclusion into the formal sector, such as secondary education, college and training for high-skill labor, along with access to upwardly-mobile social networks, are not common (Claggion, 2008; Moser et al., 2006; Webster et al., 2006). This scenario frequently leads to further loss of locally-sourced jobs, and, thus, demand for a well-trained local workforce (Zhu, Gorman et al. , 2006). Social exclusion

mixed with joblessness has been positively linked with individual and interpersonal risk and crime, including domestic violence, robbery, rape and aggravated assault (Mooney & Daffern, 2014). The cultural adaptations that spring from this environment form a type of resiliency that allow the redevelopment of a livelihood (by rational actors) in a constrained environment, which includes participation in informal and sometimes illicit markets (Lamb, 2010; Purcell, 2007).

Demographic markers of insecure regions include a high number of youth (below the age of 25), disproportionate to the number of older and skilled adults. This is common among disaffected populations lacking access to traditional social structures, medical facilities for family planning and high levels of leisure time (Lamb, 2010; Vilalta et al., 2014). Furthermore, 'Opportunity Youth' (youth between the ages of 16 – 25 who are neither in school nor employed) have specific and documented risks for anomie, strain, crime and violence (Gorman et al., 2001; Purcell, 2007; Webster et al., 2006). The youth and disengaged population that is un- or under-employed and un- or under-educated has special significance, particularly considering risk-seeking behavior and biochemical tendencies for risk-taking (Decker et al., 2011; Sampson et al., 2005; Sampson et al., 1999)

While the social science literature tends to focus on individual pathways to crime and violence, sufficient exploration of the intentional and unintentional structural mechanisms driving the 'urban dilemma' needs to take place. The urban dilemma refers to the advent of ubiquitous urbanization and the consistent production of marginalization and insecurity

among urban poor (Muggah, 2012). Urban violence generates "cascading" and cumulative effects, and, in turn, constrains the upward and outward socio-spatial and socio-economic mobility of the poor (ibid). This scenario requires new thinking in determining emerging constructs that guide the generation of culture and society in areas of marginalization.

An elaborated version of the Bronfenbrenner model using Criminological Theory and explored nested systems and their dynamic interactions with individuals (See Figure 2). At the center of the model, the individual is tasked with making rational choices in a complex environment. The microsystem generates culture through experiential learning and peers as demonstrated by Sutherland in his theory on Differential Association (Sutherland, 1947). The mesosystem produces an implicit awakening and awareness of the disparity of the less fortunate, and they realize that they (the individual, group, ethnicity, race, marginalized population) are, in fact, not part of the whole (Uchida et al., 2014; Vilalta et al., 2014).

Figure 2:
Extension of Bronfenbrenner's Ecological Systems using Criminological Theories
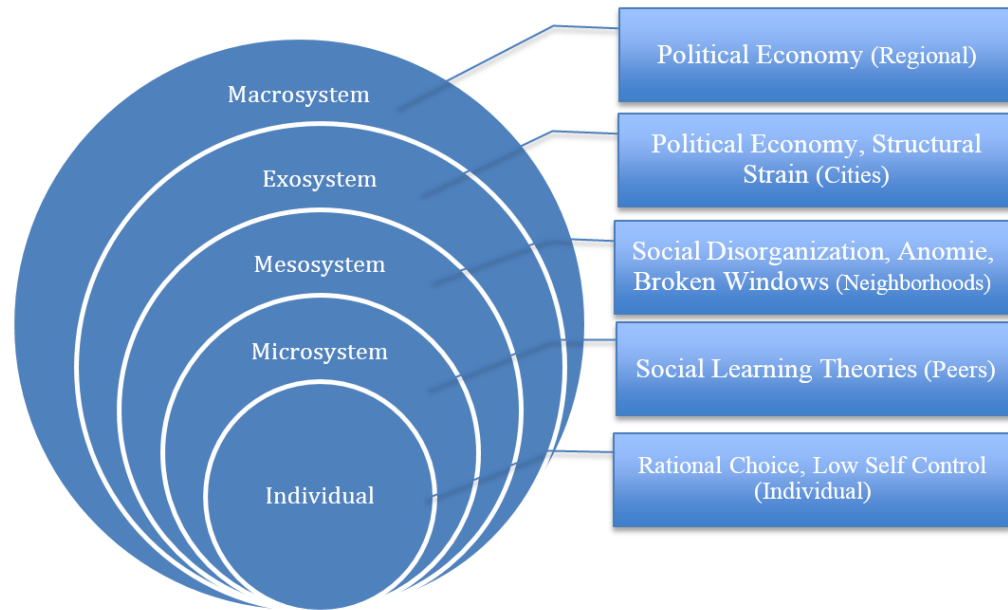
Between the mesosystem and exosystem level, the construct of Concentrated Disadvantage represents a social process, driven by internal and external conditions, through which a neighborhood might produce crime (H. Grunwald et al., 2007; Kirk, 2009; Langes, 2012). Sampson and others employed a Principal Component Analysis (PCA) to determine the Chicago neighborhood level factors that most significantly predicted the latent variable (Concentrated Disadvantage). This analysis approximated the concentration of poverty and disparity as predictors for crime, and included: (1) Percent of individuals below the poverty line, (2) Percent of individuals on public assistance, (3) Percent female-headed households, (4) Percent unemployed, (5) Percent under age 18 and (6) Percent of the population that is Black (Morenoff et al., 2001; Sampson & Graif, 2009). Conceptually, culture creation based on intergenerational exposure to these specific five factors, both spatially

concentrated and unavoidable for those unable to leave, effectively constitutes marginalization (Decker et al., 2011; Gutierrez et al., 2013; Purcell, 2007). However, in current urban settings, these and more severe conditions converge to produce environments of insecurity.

1.1.3 The Disintegration of Peace-keeping Social Processes

The next generation of theories that link to Concentrated Disadvantage to a general deterioration of the community toward Social Disorder. Social Disorder is the general term for the status of communities that are less able to intervene for their own common good in inhibiting violent or anti-social behavior (Sampson et al., 1997). The neighborhood dimensions of social organization center around the interactions of social capital, informal and formal social networks and collective efficacy (Sampson & Graif, 2009). The idea of social capital, while the exact definition is debated, is essentially 'a social organization that operates in coordination and cooperation for mutual benefit through networks, norms and trust' (Putnam, 1993). The relationship between social capital and its use in the neighborhood is defined by Morenoff and Sampson's construct of collective efficacy, referring to a 'linkage of trust and cohesion with shared expectations for control relative to specific tasks such as maintaining public order' (Morenoff et al., 2001).

Social control, as a type of implicit 'law' or rules of the community are hypothesized to exert an influence on its inhabitants. Social control, collective efficacy and social cohesion therefore generate order or in their absence allow disorder (Morenoff et al., 2001). The

inability of a community to mount a response against disorder, or the breaking of its 'law',

is seen as mediating sources of disorder and disorganization. (Kubrin & Weitzer, n.d.)/

Without these methods of 'collective efficacy' that maintain social control, violence, for

example, is allowed to persist in areas where it was not previously tolerated (Moreonoff et

al, 2006). For instance, a study of parolees in California found that high levels of

Concentrated Disadvantage and Social Disorder in the census tract or near the census tract

increased recidivism by 26% (Hipp, et al., 2010). Sampson's research looked at 8782

residents over 343 neighborhoods demonstrating that collective efficacy mediated violence

that occurred in areas of concentrated disadvantage and residential instability (Sampson &

Raudenbush, 1999).

Social Disorganization Theory grew from work at the Chicago School on concentric zone

theory which observed that crime and disorder where not randomly distributed throughout

the city but was concentrated in areas that were effectively marginalized with high levels

of poverty (SHAW & McCAY, 1942). Shaw and McCay furthered this work by noting that

juvenile delinquency was affected by the transformation of social structures. Social

disorganization was determined to be the result of three 'disorganizing' conditions: 1) high

rates of residential turnover, 2) high levels of poverty and 3) ethnic heterogeneity in the

population (Burgess, 1967). These conditions were considered key to the loss of trust

among residents, who then lacked the sufficient social cohesion to solve common

problems, share common values and enact social controls (Sampson & Raudenbush, 1999),

These processes of social cohesion historically (particularly in pre-segregation Black neighborhoods) allowed for communities to rely on each other in times of need by borrowing money, sharing transportation or extending job networks (Morenoff et al., 2001). Social Disorganization, on the other hand, generates a deep distrust of community members, interrupts the ability to create consensus on neighborhood governance and diminishes community driven activities (Clear, et al., 2003; Paynich et al., 2010; Sampson et al., 1999). As urban areas often are subject to persistent and rapid shifts in economic and social structures including gentrification, the model of the concentric zone itself might no longer hold, but the vulnerability of disadvantaged spaces become obvious by the delinquency of its inhabitants (Boggess et al., 2014).

Bursik et al (1993) described that the loss of social control as a disruption of the community's ability to control crime due to weakening private controls between (1) families and primary networks, (2) parochial controls between residents and secondary networks (i.e. schools, churches, and businesses) and (3) public controls between residents and government agencies whose taxes would improve public safety (Bellair et al., 2015). However, Sutherland's Differential Association Theory provides a divergent and important perspective. Sutherland considered delinquency as a rational act by positing that socially disorganized neighborhoods are not definitively disorganized but rather reorganized around a social learning processes that aid in the cultural transmission of undesired or criminal values (Sutherland, 1947).

It is important to note the values propagated in a community are a direct response to the current environment, whether the environment is being informed by a critical population of criminals and/or a loss of traditional social controls. Chamberlin presented evidence that up to a certain point, returning offenders are positively influenced by a neighborhood's social cohesion and social control, experiencing a reduction in the return to crime and recidivism. Once a critical density of released offenders had been reached, however, crime and offender recidivism intensifies (Chamberlain et al., 2014; Chamberlain et al, 2015)

Interestingly, researchers like Pattillo-McCoy and Wilson have been able to demonstrate that neighborhoods of high social capital do not necessary result in lower crime, as the closeness of residents allows for shared values of disengagement, isolation and lack of control of their environment (Pattillo-McCoy, 1999; Wilson, 2011). It is however possible that in insecure environments, social control and even collective efficacy is strong, only thusly coopted by criminal groups whose dominance in the neighborhood exerts a new framework on the existing mechanism of social control. An example of this would be a general agreement of the community that the young man that committed the violent rape of a neighborhood girl should be murdered.

1.1.2. Urban Insecurity and Urban Violence

There are several classifications of Urban Insecurity relating to the type of conflict present and the type of violence observed. There is *Urban Warfare* where International humanitarian law (IHL) defined conflicts occur. There are frequent instances of *Violence*

against Neglected and Marginalized populations living in slum settings, often against displaced persons or refugees. This research is focused on the third type of violence occurring in urban settings heretofore known as *'Socially/Economically Driven Conflict Zones'*.

These propagate from circumstances of social and economic marginalization and neglect followed by concentrated violence further distinguished as *'Non-Conflict Armed Violence'*. This violence is perpetuated mostly by gangs, narco-traffickers and violence actors (ICRC, 2007; Moser et al., 2006). The observance of Non-traditional Conflict zones is gaining acceptability among international communities as examples of concentrated urban violence continue to emerge without political antecedence (Nations & Settlements, 2011; UNODC, 2013).

Figure 3:
The Global Distribution of Murder by rate, 2012 & Disaggregating the Global Burden of Violence
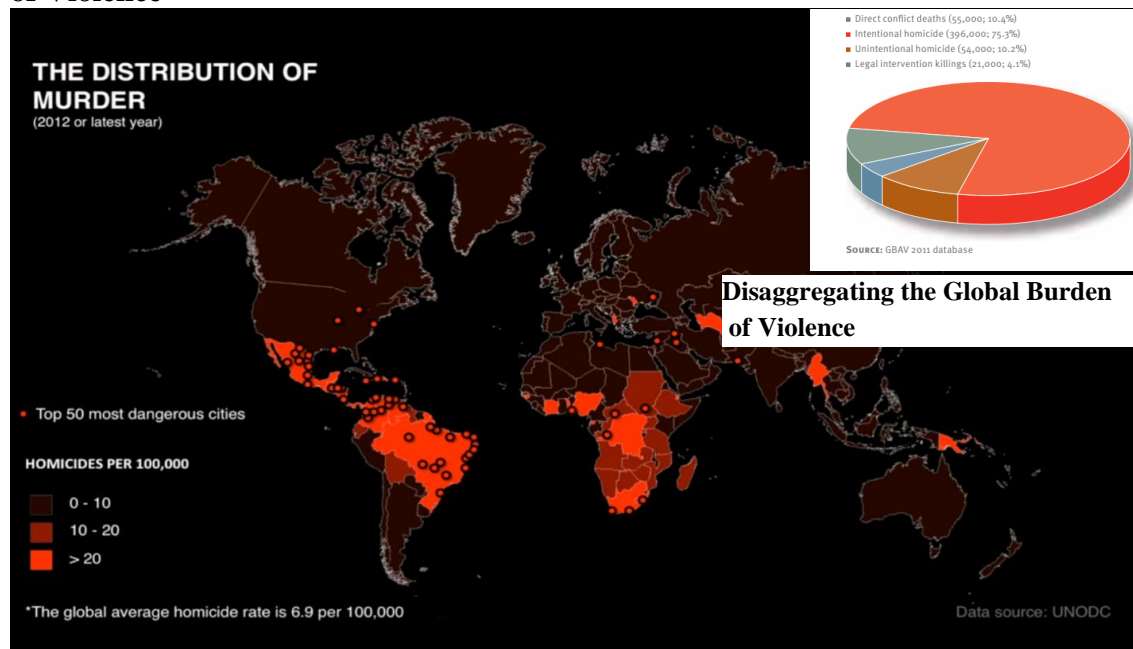
This issue is becoming epidemic. In a careful calculation of global deaths from homicide, only 10% were determined to be direct consequence of conflict happening in traditional conflict zones. Over 75% were a direct result from intentional homicide (Muggah, 2010). A number of these deaths took place within Socially/Economically Driven Conflict Zones (UNODC, 2013). (See Figure 3)

Also associated with Non-traditional Conflict zones is state failure (or collapse) of the institutional and functional capacity to maintain security against threats either to governance, military, the economy or society (Milliken et al., 2002). Without security, so called 'fragile states' have produced a wide spectrum of violent actors from gangs, violence entrepreneurs to warlords. A violent actor is implicated in the increasing imposition of power over inhabitants, and in some weak states can exert their own form of governance, often with impunity to the 'state' challenging local police (Nally et al., 2014). An example of this would be the drug cartels in Columbia, who would use of war-grade weapons, guerrilla-type coercion tactics, gender-based violence and subsequent disturbances of local/regional economies, all while under the observation of the Columbian government (Ribetti, 2002). The public health impact is significant. The subsequent emotional trauma, loss of life and community-level fear mimic that of war-torn areas and are being addressed by the United Nations Office of Drugs and Crime as a Human Rights issue (Moser et al., 2006; Nations & Settlements, 2011).

One of the hallmarks of Urban Insecurity is the proliferation of extraordinary violence and violent actors (Lamb, 2010; Vilalta et al., 2014). Regarding the creation of violence in urban environments, there is evidence that inequity and structural strain generate crime cultures which emerge as inhabitants look to informal and illegitimate markets to meet their needs not readily provided by state-governed areas (Moser et al., 2006; Peres et al., 2012; Ribetti, 2002).

Insecurity with violence produces fear explained as "the institutional, cultural and psychological repercussion of that violence [with the] outcome of destabilization, exclusion and uncertainty"(ISS-ICRC et al., 2012). This is an integral part of the definition of Urban Insecurity that is unfortunately difficult to measure; the feeling of being safe outside of your home, hearing gunshots nearly every evening, seeing dead bodies regularly, or having a feeling of hopelessness for the future. This type of chronic community trauma will require serious public health attention as evidence of community trauma is mounting (Purcell, 2007).

Referencing the existence of 'parallel society', profoundly violent circumstances have defined the urban landscape in the US, but are concentrated in very specific environments. This segregated experience of violence, violent crime and homicide happen almost exclusively in microenvironments that are populated by minorities (Parker, 2000; Paynich el al., 2010). In the US there are a number of urban centers that maintain murder rates greater than all megacities, with the exception of Mexico, Columbia and Honduras

implying that the conversation needs to be shared within international insecurity circles with an exchange of drivers, vulnerabilities and strategies.

Violent crime capitals by 2014 violent crime rates per 100,000 are as follows[1]: Detroit, MI (1.988.6 incidents), Memphis, TN (1,740.5), Oakland, CA (1685.4) St Louis (1678.7), and Milwaukee, WI (1476.4). Of those cities named '*Murder Capitals*' based on 2014 murder rates per 100,000 people are on par with many cities across the world also experiencing Urban Insecurity: (St Louis (49.9%, 318,574), Detroit, MI (43.5%, 684,694), New Orleans, LA (38.7%, 387,113)[2], Baltimore, MD (33.8%, 623,513), Newark, NJ (33.3%, 279,110). A quick observation important to the scope of this study refers to city population as it relates to murder rate. High murder rates in smaller cities mean less total number dead but also infer that the density of those at risk for dying are subject to implied population dynamics implicit within a small city.

1.4 Summary and Research Goal

This research requires a wider 'Systems' approach to understanding not only the persistent poverty and violence plaguing New Orleans, but the presence of Urban Conflict Zones. These represent spaces suffering from trauma, heightened morbidity and death, societial and institutional isolation and the intense loss of resources like access to work and child health.

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[1] https://www.fbi.gov/about-us/cjis/ucr/ucr
[2] This named murder rate for New Orleans is a ten year low

The overall goal of the proposed research is to explore the dimensions of Urban Insecurity in the context of the City of New Orleans in order to provide local policy-makers with insight into the drivers of Insecure Urban environments. The drivers of Urban Insecurity in the American context are different than LMIC's in their etiology but - in theory - not in their effect. This research will reflect on established macro, mezzo and examine their hypothesized effect on micro-level drivers of Urban Insecurity. In New Orleans, insecurity is evidenced by distinct microenvironments of heightened poverty, structural strain and an extraordinary violent crime and murder rate (Kirk, 2009). The impact of hypothesized microenvironments of Urban Insecurity will be tested on those highly vulnerable to insecurity, specifically felony offenders released from prison. This research will represent a layered case study of New Orleans in three parts. There are three specific aims that contributed to the fulfilment of the overall research goal of this dissertation.

1.5 Specific Aim #1: The Development and Analysis of an Urban Insecurity-Index

Specific Aim #1: To develop, test, and examine spatially an Urban Insecurity index in an American context. An ecological model with spatial analysis will be used to test for the presence and severity of Urban Insecurity using the block group level as the unit of analysis. The working hypothesis is that the three theoretical domains of Urban Insecurity–Structural Inequality, Concentrated Disadvantage and Social Disorganization will reliably determine the latent variable of Urban Insecurity.

A principal assumption is that these domains alone do not produce Urban Insecurity, however as they occur together, their interaction produce an environment that may exhibit social and economic destabilization, extraordinary violence and resultant individual and community fear, such that they mimic active conflict zones (Nations & Settlements, 2011). New Orleans has maintained notoriety, shockingly exposed to the nation during Hurricane Katrina, as a city of extreme inequality, functional segregation and poverty (Kirk, 2009). Additionally, specific spaces of New Orleans have consistently and disproportionately demonstrated the widespread loss of life through homicide, group exposure to trauma and decreased perceptions of safety (i.e. repeated exposure to shootings and dead bodies, inability to play outside, restricting movement to avoid crossing into rival neighborhoods) (Distefano et al., 2009; Zhu, Gorman et al, 2006).

1.6 Specific Aim #2: Examine the Relationship of Urban Insecurity on Revocation of newly Released Offenders

Specific Aim #2: To examine the effect of Urban Insecurity on reentry outcomes of individuals released into Probation and Parole (P&P) supervision throughout the city of New Orleans. The primary and the most severe reentry outcome of interest is revocation, or long-term return to prison. The hypothesis is that as Urban Insecurity increases, revocation will similarly increase. Using multilevel models, individuals were nested in their residential block group level to examine the impact of microenvironments of insecurity on revocation.

The study uses data gathered from a Reentry program for adult offenders implemented from April 2012 to July 2014 in New Orleans and Baton Rouge, Louisiana. Funded by the Bureau of Justice Assistance FY2012 Second Chance Act Statewide Recidivism Reduction and Violent Crime Prevention Initiative (CPI), the CPI project intended to reduce recidivism and violent crime among high-risk reentry clients by targeting high-risk offenders in "hot spot" high crime neighborhoods in Probation and Parole Districts with enhanced supervision standards. Only data from New Orleans was utilized in this research.

The opportunity to use reentry populations to demonstrate the impact of Urban Insecurity represents an unusual benefit regarding the detail of offender data gathered, which documented positive and negative behaviors over time including employment, drug use, residential (in) stability, detected misdemeanor and criminal activity and social service needs via Probation and Parole records. Also there are gathered several historical data including: criminal history, juvenile crime history and the recent crime requiring supervision (i.e. recently released offenders convicted of gun, drug and violent crimes), drug preferences, arrests, etc. These data were utilized to determine the effect of Urban Insecurity on the behaviors and types of crimes committed by released offenders. Released offenders are vulnerable to insecurity due specifically to the threat they present for further criminal activity based on well-evidenced individual, interpersonal, economic, environmental and societal risks associated with recidivism (Baron et al., 2002; Blattman, 2015; Chauhan et al., 2009; Pager, 2008).

A released offender could be considered vulnerable to Urban Insecurity because they are released without obvious access to capital, employment and sustainable housing or the inability to protect him or herself from crime. The reentry process infers not only exposure to Urban Insecurity but doing so without the benefit of protectors to its influences (Decker & Pyrooz, 2011; Kirk, 2012).

1.7 Specific Aim #3: The Moderating Impact of Insecure Environments on Treatment for Recidivism

Specific Aim #3: To determine the moderating impact of Urban Insecurity on revocation specific to four protective and threatening influences to the released offender's reentry outcome, specifically: **1)** Recidivism Risk, **2)** Drug Use, **3)** Employment and **4)** Probation and Parole contacts, each highly predictive of revocation. The hypothesis is that the effect of each aspect will be moderated by Urban Insecurity and thereby negatively impact or prevent their anticipated positive impact on revocation.

Recidivism Risk is an aggregate measure categorizing crime history by type, severity and length (see Individual-level Measure, Section 2.2). This measure assumes a strong relationship between the offender's criminal career and exposure to Urban Insecurity using the address of release. It has been demonstrated that not only do offenders return to their

primarily residence before incarceration, but also that offenders main income up to and beyond 8 months after release is sourced from family and friends (Carpenter, et al., 2010).

Employment is a central theoretical component of successful reentry and of the Urban Insecurity Index(James, 2015). The hypothesis is that areas both high in Urban Insecurity and those sub-indices related to employment would have significantly larger proportion of revocation.

Finally, regarding P&P supervision, the CPI dramatically shifted the approach to standard supervision shifting the average number of Probation and Parole Officers (POs) to supervision clients from an average of 1 PO to 150 cases to 1 PO to 50 case, thereby allowing an increase of visits to average 6 visits (standard) to 19 visits (enhanced). The CPI study hypothesis was that improved quality and quantity of PO supervision would decrease revocation. The current study hypothesizes that both scenarios would be moderated by Urban Insecurity. Therefore, the two treatment cohorts were compared for their impact on revocation and the moderation effect of Urban Insecurity was determined in both contexts.

CHAPTER 2, PAPER 1: CONFLICT ZONES NEXT TO MILLION DOLLAR HOMES: URBAN INSECURITY AND ITS SPATIAL DISTRIBUTION IN A US CITY

2.1 Introduction

Urban Insecurity is an emergent issue of intensifying global concern. If Urban Security relates to reasonable access to a sustainable livelihood, or the means to the necessities of life, specifically work, food, shelter, water, and personal as well as community safety in the urban context, then Urban Insecurity is typically regarded as its converse. This scenario references a constant competition for limited available resources in an urban setting often not originally planned for rapid expansion or high population density (ICRC, et al 2007). Urban Insecurity in LMICs can be said to have several drivers, with the foremost issue being rapid urbanization. With now over 50% of the earth's population residing in urban areas, this particular demographic shift represents a population growth that occurs primarily among low-income areas or slums, as people leave rural livelihoods for the perceived improvements in jobs and resources to be found in the city (Collinson et al, 2010). For the poor, who come to or live in urban centers to extract labor and resources, many are forced to 'self-select' residential areas that are previously suffering from marginalization, under-institutionalization pronounced inequity and in many cases violence (Williams, 2009).

The dominant driver of Urban Insecurity in the current American context is the rapid decline of manufacturing and industrial economy that initially drew much of the population to a given city (Tillyer et al., 2011; Webster et al., 2006). Cities suffered a precipitous shift

in the ability to employ a labor force that was specifically oriented toward those industries (Ousey et al., 2009). As jobs became increasingly globalized across multiple sectors , a condition emerged that is similar to that found within areas of rapid urbanization in (Apprey, 2006; Muggah, 2012). This is the phenomena of a large urban concentration of low skilled labor without equivalent employment (Bellair et al., 2015; Boggess et al., 2014; Claggion, 2008). While a weak state or weak economy may drive Urban Insecurity in the LMIC context, in the American context large macroeconomic shocks was followed by scarcity of employment, and can be said to drive Urban Insecurity (ISS-ICRC, 2012; Lamb, 2010; Milliken et al., 2002). In addition to the macro-level developments that have negatively affected low and low-middle class wealth, this research proposes that it is the specific element of structural racism and consequent structural inequality that concentrates of Urban Insecurity almost exclusively into racial minority populations (Braveman, P, Gruskin, 2003; Massey, 1990; Paynich et al., 2010; Steinmetz et al., 2015). The condition of unequal security is particularly insidious because it suggests that while some populations thrive, another situation characterized by the institutionalization of inequity operationalized only among specific populations through effort and/or neglect, creating a parallel society.

> *"Fragility can be understood as a kind of continuum rather than a static condition. It is a dynamic state that affects different areas differentially. Stable and functioning areas of cities can, and frequently do, co-exist alongside fragile and violence-affected spaces. And while some planned neighborhoods and informal settlements may experience chronic instability, it is also the case, to borrow from Achebe, that no condition is permanent"*
>
> *Robert Muggah,* (Collinson et al., 2010)

Given the concentrated abundance found in the throughout American cities, there does not seem to be a legitimate reason for microenvironments existing in a state of severe insecurity therein to persist. In 'American Apartheid', Massey discusses how the interaction of rising levels of poverty with rising levels of residential segregation precipitated a secondary wave of segregation, one that appeared to be based on class, but was in fact still based on race (Massey, 1990).

As discussed in more detail in the Chapter 1, the combination and interaction between Structural Inequality, Concentrated Disadvantage and Social Disorganization is hypothesized to drive Urban Insecurity.

2.2 Operationalizing Urban Insecurity

While Urban Insecurity has a generally accepted description and a small body of literature currently being produced to explicate the concept, there are few studies that follow the process of empirical research (Muggah et al., 2015; Peres et al., 2012; Vilalta et al., 2014). This study is an attempt to do just that, by proposing literature and theory-based drivers for Urban Insecurity in the American context, then testing those drivers for their significant spatial patterns. Once developed, further testing to validate Urban Insecurity as an operational concept occurs by evaluating its impact within a vulnerable population.

The city of New Orleans, Louisiana, is an ideal location for the proposed research. New Orleans has an astounding combination of those elements associated with Urban Insecurity in LMICs, namely: weak infrastructure and corrupt governance, intense marginalization, evident structural inequity towards specific groups and an economy somehow unable to absorb its population. However New Orleans also has some features not considered currently in mainstream research, making the data generated here quite unique (Muggah, 2014; Nations & Settlements, 2011; UNODC, 2013).

The construct of Urban Insecurity in the American context is drawn from a framework of indicators equivalent to those given my international text, outlined in Chapter 1 (See Figure 1). While several macro level indicators have been introduced, they will not be treated thoroughly in this measure, rather the focus of this investigation will be on the interactions and concentration effects occurring from the exosystem to the individual levels. This will require an examination of additional ecologic constructs implicated in the generation of social instability and the production of criminal actors that promote insecurity. As suggested in Figure 4, Concentrated Disadvantage, Social Disorganization and Collective Efficacy are key social processes potentially driving Urban Insecurity (Clear, et al., 2003; Morenoff et al., 2001; Paynich et al., 2010; Sampson et al., 2002).

Figure 4: Overview of Urban Insecurity as a Latent Variable
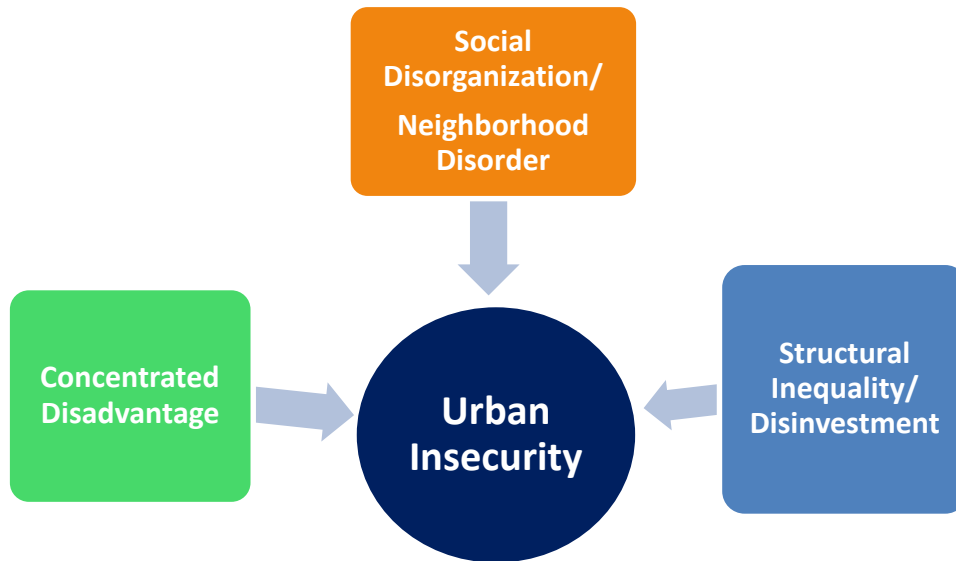
2.2 Methods and Measures

2.2.1 Study Design

The proposed study is a cross-sectional secondary, ecological study with US Census Block group as the unit of analysis. Ecological research offers a specific capacity to observe a variety of spatially-oriented data available around the social, economic, demographic and housing characteristics of households. Given the temporal limitations of the 10-year census, the American Community Survey now provides aggregates databases of up to 5-year data at the block group level to now estimate population effects with samplings strategies approaching the accuracy of the 10-year census. The block group was chosen as the appropriate level of aggregation to capture hypothesized 'microenvironments' where

factors of Urban Insecurity concentrate in the City of New Orleans but lose their definition and distinction at higher levels of aggregation. Unless otherwise notated, all following measures are presented a percent of the block group population having a specified attribute with a scale of 0% to 100%.

2.2.2 Index Construction and Justification

As indexes are drawn from many indicators and from several sources, a note on the temporality of the data should be made. The papers 2 and 3 in the following chapters will refer to study cohort that were released from prison to areas of high to low Urban Insecurity in 2013 and followed over the course of up to 18 months. The data used to approximate Urban Insecurity were therefore taken from time periods most applicable to this span of time. In Table 1, the data used, their sources and the dates from which they are derived are listed and overlap or the lack thereof is highlighted. Some data points were rare and therefore difficult to obtain for the appropriate timeline however a rationale for the addition of the data in the analysis is given per section.

Table 1:
Secondary Data Sources and corresponding dates used to construct the Urban Insecurity Index

Data Source	# of Indicators	Year
5-year American Community Survey (ACS)	26	Sampled from 2009 - 2014
North American Industry Classification System	2	2015
Department of Code Enforcement Blight Registry	1	1/2011 to 5/2012
New Orleans Crime Report	3	2013
Million Dollar Block project	1	2007

While the timelines per indicator chosen are not a perfect overlap, the vast majority, nearly 80%, of indicators come from one source. There is sufficient overlap with four of the remaining indicators. The two variables from the North American Industry Classification System, though beyond the timeline of the ACS, refer specifically to businesses. The single indicator from the Department of Code Enforcement Blight Registry occur within the timeline of the ASC. The New Orleans Crime Report was chosen specifically for its intersection with the data presented in the following papers presented in this dissertation from 2013. Lastly, the Million Dollar Block project is considered a rare data point, requiring extraordinary funding, analysis and multiple data resources. Overall, incarceration trends in New Orleans are slow to change, though the year of 2007 represented the beginning of the rebound in crime after Katrina.

2.2.2.1 Structural Inequality Indicators

An exploration of Structural Inequality begins with education. Several education indicators were ascertained from the ACS 5-year estimates (2009-2014), each probing specific aspects of exposure, impact and outcome of education. **Percent of the population age 25 and over with a Bachelor's degree and higher** and **percent of the population age 25 and over with no high school diploma** were chosen to give two extremes of a similar concept. A block group with a high percentage of individuals with Bachelor's degrees and higher would infer that there were fewer people without a high school diploma and vice versa. **The percent of children attending public school** was utilized as an indicator of the

proportion of children in schools. **Percent of young people (ages 16-19) not in school and not working ('Opportunity Youth')**, is the percentage of high school graduates and non-graduates (including equivalency) both not enrolled in school and not employed, out of all 16-19 year olds. The density of opportunity youth, also known as 'Disengaged Youth', are cited as driving crime and insecurity in urban settings but also imply a lack of the ability of the formal economy to absorb this group within the labor force to within extended forms of vocational readiness (Belfield et al., 2012).

In an examination of structural inequality, employment plays a large role. Income is an intuitive measure of employment, measured by **median household income in the past 12 months (in 2014 inflation-adjusted dollars) per block group.** As a measure of subsistence, the ACS developed a measure using Median Gross Rent as a Percentage of Household Income was divided by 1000 and renamed **Rent to Income Ratio** and represented the population of the block group who is paying a large proportion of their income to rent.[3]

Percent of the civilians employed in the service industry was calculated using **occupation for the civilian employed population 16 years and above,** per block group. This category included: healthcare support occupations, protective service occupations, law enforcement workers including supervisors, firefighting and prevention, and other

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[3] https://www.socialexplorer.com/data/ACS2010/metadata/?ds=SE&table=T103

protective service workers including supervisors, food preparation and serving related occupations, building and grounds cleaning and maintenance occupations, personal care and service occupations. Service jobs are intended to represent low skill populations working in low pay industries.

To add measures of concentrated abundance to contrast concentrated disadvantage, the location of high-grossing business-owners and firms were used to represent areas that were considered safe and affluent enough for operations and for clients to frequent. These businesses represent an important spatial differential regarding areas that are considered safe or unsafe for business. To measure this the **rate of physician and lawyer offices per population** within the block group was used. This information was obtained through 2015 data from the North American Industry Classification System (NAICS), which provided data on the location, size and type of nearly all businesses in the Orleans Parish, Jefferson Parish and surrounding Parishes (parish = county). As with the percent of the persons with a bachelor's degree, this indicator was chosen to demonstrate the concentration of professional offices as a proxy for spatial concentration of concentrated advantage and individual professional achievement. This proxy represents individuals with advanced education, establishing businesses with historically high gross and profits.

A second set of Employment indicators represented the ease of attending employment, specific to type of transportation. This issue is a critical one due to the research on structural barriers being not only pervasive but also cyclic and multi-generational, as highlighted in

the section on the hypothesized indicators for Concentrated Disadvantage. Geographic

isolation from employment, which could also be considered a lack of dispersion of skill-

appropriate employment across the city, creates a scenario where the working poor are

required to leave their neighborhood, and travel to another area of town where employment

exists, often working for low wages (Webster et al., 2006). The indicators utilized to

capture this issue were derived from the commuting to work indicator from the ACS and

was divided into two indicators: **Percent of the population commuting to work using a**

car, truck or van and **percent of the population commuting to work using public**

transportation. An exploration of the principal mode of travel to get from home to work

infers both time lost in travel and the lack of a car as an asset.

Finally, a hypothesized component of disinvestment was explored utilizing indicators that

reflect choices for community welfare that could have been impacted by pro-poor policies,

such as the prevalence of food deserts and blight, along with the value of homes. Data for

blight was made available through the Department of Code Enforcement, which is tasked

with ensuring building compliance and the elimination or mitigation of blighted properties

in the City of New Orleans. The Department of Code Enforcement provided a record for

public review of the status for all 12500 blighted properties from the dates of January 4,

2011 to May 31, 2012. Once all properties that had been "occupied, work in progress, in

compliance, abated, passed inspection, road home, demolished or address did not exist",

the remaining statuses of "violation, violation posted, no work in progress, existing case,

not complied, vacant lot, scheduled, change of ownership, violation: imminent danger,

violation: unoccupied building or violation: work in progress" were counted and used as a numerator for a ratio of blighted houses to all houses per block group level. Therefore, blight was measured as the **percentage of blighted properties of all properties** in the block group.

An important distinction between the indicators measuring poverty versus inequity is the differential between dimensions of where an individual, or in this case, a block group, are measured in terms of levels of income, wealth or assets, as opposed to presence or lack of an indicator. As seen in Table 2 below, the Structural Inequality Indicator presents a grouping of measurement that tests the presence or lack of the indicators chosen to represent structural equity. With the exception of Median Income for 12 months, all indictors below refer to fundamental elements of inclusion or exclusion into the social order, including access to quality education, gainful employment, mobility and the acquisition of assets.

Table 2:
Distinguishing Proposed Structural Indicators as Unequal Measures generating Structural Inequality

Structural Inequality Indicator	Block group Structural Indicator*
Percent population over 25 with Bachelor's degrees	*A college degree
Percent population over 25 without HS Diploma	*A high school diploma or equivalency
Percent of children attending Public school	*Attendance of a private school
Percent population as Opportunity Youth	*Engagement school or employment between 16-25
Percent Home Owners vs Renters	*Asset ownership
Median Income for 12 months	n/a
Rent to Income Ratio among Renters	*Discretionary income
Percent population using a Car for Work	*Mobility and asset ownership
Percent population using Public Transportation for work	*Mobility and asset ownership

Percent of Employed Working in Service Industry	*Low skill, low wage work
Rate of Law and Doctor Offices per population	*High skill, high wage work
Ratio of Blighted Houses to All Houses	*Ability to repair home after Katrina
Jail Expenditures per Block group	*Population exposed to Incarceration
Rate of Homes valued less than $150K to total homes	* A major asset of high value
* possesses or does not possess	

2.2.2.2 Concentrated Disadvantage Indicators

As per the work of Robert Sampson on Concentrated Disadvantage, the construct was calculated from six U.S. Census variables (Sampson et al., 1997):

1) Percent Black

2) Percent Female-Headed Households

3) Percent of Individuals Below the Poverty Line

4) Percent Unemployed

5) Percent of individuals On Public Assistance

6) Percent Less than Age 18

Percent of the population of Black race was derived as a proportion of Black people to the total population in a block group. **Female headed households** were a measure of Households with Children Under 18, but specified on the marital status of 'single' for the Head of Household. This metric demonstrates family disruption implying the lack of a father in the home. The Concentrated Disadvantage measures related to poverty used the **ratio of income to poverty level in the past 12 months**, using the sum of all households below 100% of the Poverty Level as the ratio for the Block group . **Unemployment** was

taken as a measure of all civilians employed population 16 years and above, specifying those who were actively pursuing jobs or collecting unemployment benefits. Percent of **the population receiving public assistance** was derived using Public Assistance Income for the Past 12 months divided by 1000 to create a proportion. The Child Dependency ratio or **children under 18** ratio was taken as a proportion of the total population based on the total number of families with Own Children under 18 years by Family Type and Age.

2.2.2.3 Social Disorder and Disorganization Indicators

As mentioned previously, Social Disorganization was conceptualized based on work by Sampson and colleagues, including domains of Population Density, Race, Residential Instability, Home Ownership, Family Disruption (unwed mothers), Ethnic Diversity and Collective Efficacy. With the exception of Collective Efficacy, which was not available in existing secondary databases, all indicators were utilized to represent social disorganization in this research. Instead, crime rate was utilized as a marker for low collective efficacy and social disorganization, based on their strong association with violent and non-violent crime (Morenoff et al., 2001) New Orleans annual crime rate for all crimes was calculated with 2013 police department data with address information for each type of substantiated crime. Substantiated crimes refer to those crimes were sufficient evidence has been gathered to demonstrate a criminal offense has occurred and grounds for an arrest has been established. The New Orleans police department report used lists 33,700 crimes by type of crime that were then regrouped into **Violent crime**, **property crime, misdemeanor crime**, **and drug crimes** (which appeared under-reported).

Again, using the NAISC data, the location and concentration patterns of Alcohol Outlets throughout the city was determined. Alcohol Outlets have been associated with violence and other negative health outcomes (Theall, et al., 2009; Theall et al., 2009). Off-site outlets are considered more so associated with disorder due to the increased disorder occurring in proximity to such establishments. Alcohol outlets that were registered as restaurants were excluded, but convenient stores, alcohol stores, bars and other related types remained. The final measure was a **rate of alcohol outlets per 1,000 population**.

Percent of crowding refers to a high number of people residing within a home. The Census determines crowding within the home as a measure of the number of bathrooms to people, termed Plumbing Facilities by Occupants per Room by Year structure. Those homes with more than one person to bathroom were counted and divided by the number of all houses within the block group**.** Residential Instability. Regarding Ethnic Diversity, in the New Orleans context, there was not yet a significant population on immigrants to justify this indicator, though that is slowly changing.[4] To capture if the population of foreign-born residents had an appreciable contribution to the index, **United States citizenship status** was gathered as a proportion of the total Block group population.

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[4] American Community Survey

Finally, **jail expenditures per block group** based on data from a Columbia University study, the 'Million Dollar Block' study, was utilized as a proxy for the intensity and concentration of incarceration of residents by implying high expenditures mean high incarceration. The study took place in numerous major American cities including New Orleans in 2007. The variable represents the amount of money spent on jail expenditures and ranged from $0 to over $300,000.

2.2.3 Study Population

The study area is Orleans Parish, which encompasses the City of New Orleans, a small urban metropolis, comprised of 350 square miles of with a current total population of 384,320 inhabitants. Orleans Parish consists of 177 Census tracts broken into 497 Block groups. Block groups are the smallest geographic units published by the Census are defined as clusters of blocks within a census tract to contain 600 and 3000 people that have the same first digit of their four-digit census block number.

2.3 Statistical Analysis

To generate socio-demographic indexes traditional Factor Analysis (FA) and Principal Component Analysis (PCA) are common methods of data reduction and latent variable extraction. This research opted instead to use Common Factor Analysis (CFA). The primary benefit in CFA lies in the use of the correlation matrix to produce proportional measures of the variance among indicators that are both common and unique. This occurs also without unnecessarily reducing indicators within factors when they share similar patterns of variance, as is the case in PCA. The eigenvalues of the reduced correlation

matrix are comparable to the traditional eigenvalues presenting proportional and cumulative variance among the sample, though using the correlation matrix. The variance explained by each factor provides a measure of the combined variance represented by all factors, while the final communality estimate of residual correlations provide the variance explained by each factor ignoring other factors (uniqueness). Estimates of communalities were provided along with the squared multiple correlation (R2) between the variable and all other variables. The rotation method used in generating the loading pattern was Promax.

Factors retained were determined by the following criteria: 1) an eigenvalue above 1.0, 2) at least 10% cumulative variance explained by those factors, and 3) a loading of at least 0.30 or more on each factor. For criterion one, a scree plot of eigenvalues was produced and the appropriate number of factors were retained (elbow). For those retained factors, the process was repeated and a factor loading plot was produced to examine the unique variances between factors and the strength of each indicator's loading. Finally, a Kaiser-Meyer-Olkin measure tested sampling adequacy and a Cronbach alpha test was performed on the fully developed index. The Cronbach alpha as a measure of internal consistency presented an alpha value giving a measure of how reliable the index was. The cut-off for a reliable Cronbach alpha is 0.70. The remaining index was z-scored using the indicator mean and standard deviations. This final measure was subjected to the CFA process once more to ensure no irregularities.

The CFA generated a number of factors, and each were tested separately using the same PCA process to determine if they could stand alone as sub-indices so they might tested for

their impact against a population. The overall index and each sub-indices derived from the PCA was mapped using ArcGIS©. Spatial auto-correlation using Global and Local Moran's I were performed using a spatial software developed by Luc Anselin called GEODA©. Spatial auto-correlation analysis allowed for a measurement of significance regarding the clustering of the Urban Insecurity Index and sub-indices. Global Moran's I analysis essentially tests randomization patterns of clusters and was the principal test to determine if the spatial patterns and clusters were statistically significantly nonrandom. The Local Moran's I tests allows for an analysis of local clusters and the relationship between those clusters. A p-value of .001 indicate of non-random patterns of clustering (Anselin, 1995). The spatial autocorrelation maps produced were analyzed for their geographic patterns and significance levels (*p value*) of non-randomly occurring areas of insecurity in Orleans Parish.

2.4 Results

As seen in Table 1, according to the 5-year ACS (2009-2014), Orleans Parish residents were characterized by a majority of Black population comprising 60.2% of residents versus a 33.0% White and 6.8% Asian, Latin and other populations. The average age of the population is 34 and a median income is $36,964. While there is a relatively small unemployment rate (7.2%) there is a 22.7% rate of households that live below the poverty line, which increases to nearly double for unmarried female-headed households, with an average poverty level of 58.8%.

Table 3:

Descriptive Demographic, Social and Economic Characteristics of Orleans Parish using 5-year ACS Census data, (2009-2014)

(N=497 block groups)	Total (%)
Total Population	343,829
Race	
Black	206,871 (60.2%)
White	113,428 (33.0%)
Other	28,021 (6.8%)
Sex	
Male	176,743 (48.0%)
Female	191,728 (52.0%)
Age	
Median Age: Male	34.4
Median Age: Female	35.9
Child Dependancy by Household Type	
Married	29,364 (38.5%)
Male-Headed Household	5,926 (7.7%)
Female-Headed Household	40,733 (53.4%)
Median Income (general population)	$36,964
By Child Dependancy by Household Type	$36,575
Married	$88,837
Male-Headed Household	$31,693
Female-Headed Household	$17,843
Poverty Status of all Households	
Above the Poverty Level	87.3%
Below the Poverty Level	22.7%
Poverty Status of Households with Children Under 18	
Above the Poverty Level	58.5%
Below the Poverty Level	41.5%
*Female-Headed Households	58.8%
Percent Employed (Civilian, above 16)	
Employed	164,119 (54.7%)
Unemployed	21,497 (7.2%)

Female Headed Households below the Poverty Level

Across 489 block groups, a number of trends characterize Orleans Parish. Firstly, there is a trend in heterogeneity among the concentration of specific indicators and sub-indices among the geographic areas. The significance of heterogeneity in the geographic context

occurs when the average presence of an indicator is concentrated, appearing at a high

intensity in certain areas but not others. Demographically, there is a strong and

concentrated presence of a Black population (61.6%), female-headed households (42.1%)

and households with youth under 18 years old (47.7%). Measures of abundance, such as

income (~$43,000), car and house ownership (47.1% and 49.2%, respectively) and the

attainment and use of advanced and professional degrees (31.5%) were reverse coded, as

these elements were concentrated in areas where Urban Insecurity was expected to be low

and negative loading on the factor was expected. While poverty indicators such as those

below the poverty level (23.9%), on public assistance (9.3%) and the unemployed were on

average low (7.5%), the upper range of these indicators at the block group level 47% and

53% respectively, is quite wide and implies that there are areas with extraordinary either

abundance and depravity. Finally, there was a noteworthy difference in the rate of

misdemeanor crimes (5.2 per 1,000 population) and felony property crimes 4.7 per 1,000

population) to felony violent crimes (0.7 per 1,000 population) which were taken as an

average rate of the block group population. Again, the range of misdemeanor crimes and

property crimes extend from 0% to 99% implying the potential for both a high dispersion

and concentration across the Parish, less so for violent crimes whose range tops out at rate

of 22% violent crimes per block group population.

2.4.1 Common Factor Analysis

Component extraction and index construction

Twenty-five indicators were used to represent the hypothesized domains of Urban Insecurity are previously described in the methods section. Descriptive statistics for the chosen indicators are shown below in Table 2, and provide important data on the homogeneity and heterogeneity of those indicators at the block group level.

Table 4:

Proposed Factor Analysis Structure to construct the latent variable of Urban Insecurity, by factor and indicator, with block group level means and ranges using 5-year ACS Census data, (2009-2014)

	Indicator	Mean (95% C Interval)
Factor 1: Structural Inequality	Percent of children attending Public school	.147(0.00-0.52)
	Percent population over 25 without HS Diploma	.170(0.00-0.68)
	Percent population over 25 with Bachelor's degrees	.685(0.06-1.00)*
	Percent population as Opportunity Youth	.137(0.00-1.00)
	Percent Home Owners vs Renters	.508(0.00-1.00)*
	Median Income for 12 months[5]	.957(.353-1.00)*
	Rent to Income Ratio among Renters	.339(0.00-0.50)
	Percent population using a Car for Work	.529(0.00-1.00)*
	Percent population using Public Transportation for work	.239(0.00-0.75)
	Percent of Employed Working in Service Industry	.272(0.00-0.99)
	Rate of Law and Doctor Offices per population	.935(0.35-1.00)*
	Ratio of Blighted Houses to All Houses	.044(0.00-0.99)
	Jail Expenditures per Block group	.066(0.00-0.45)
	Rate of Homes valued less than $150K to total homes	.401(0.00-1.00)
Factor 2: Concentrated Disadvantage	Percent of population Black	.616(0.00-1.00)
	Percent Households headed by Single Females	.421(0.00-0.91)
	Percent population under 18 years old	.477(0.00-0.86)
	Percent population Below Poverty Line	.239(0.00-1.00)
	Percent population Unemployed	.076(0.00-0.48)
	Percent population on Public Assistance	.093(0.00-0.53)
Factor 3: Social Disorganization	Rate of Felony Violent Crimes to population	.007(0.00-0.25)
	Rate of Felony Property Crimes	.047(0.00-0.99)
	Rate of Misdemeanor Crimes to population	.052(0.00-0.99)
	Rate of Alcohol Outlets to population	.005(0.00-0.22)
	Percent population living in Crowded housing	.094(0.00-0.70)
	Rate Jail Expenditure per population	.092(0.00-0.67)

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[5] The 5-year ACS Median Income for 12 months is calculated as a proportion of $1,000,000 and reverse-coded

Table 5:

Urban Insecurity Common Factors Analysis results including novel factors, indicators retained and factor loadings

N=489	Indicator	Factor Loadings			
Factor 1: Structural Inequality					
	Percent of population Black	**.555**			
	Percent population over 25 without HS Diploma	**.739**			
	Percent population over 25 with Bachelor's degrees	**.811**			
	Percent of Employed Working in Service Industry	**.660**			
	Rate of Law and Doctor Offices per population	**.468**			
	Ratio of Blighted Houses to All Houses	**.770**			
	Rate of Homes valued less than $150K to total homes	**.791**			
Factor 2: Concentrated Deprivation					
	Rent to Income Ratio		**.647**		
	Percent population Unemployed		**.422**		
	Percent population Below Poverty Line		**.700**		
	Percent population Receiving Public Assistance		**.473**		
	Median Income for 12 months		**.611**		
	Percent Home Owners vs Renters		**.677**		
	Jail Expenditures per population		**.304**		
Factor 3: Crime and Alcohol					
	Rate of Felony Violent Crimes to population			**.948**	
	Rate of Property Crimes to population			**.986**	
	Rate of Misdemeanor Crimes to population			**.988**	
	Rate of Alcohol Outlets to population			**.369**	
Factor 4: Female Hardship	Percent Households headed by Single Females				**.507**
	Percent population under 18 years old				**.848**
	Percent of children attending Public school				**.497**

The Common Factor Analysis produced an index using 21 of the 33 proposed indicators and accounting for 95.26% of the total variance among the factors shown to be representative the construct of Urban Insecurity. Using the convention of retaining all factors above an eigenvalue of 1.0, four factors were extracted with eigenvalues of 7.1, 3.1, 2.0 and 1.3 respectively (Table 5).

Table 6:
Urban Insecurity Index Validation and Reliability indicators from Common Factor Analysis results, including eigenvalues by factors, cumulative variance explained and Cronbach alpha

	Factor Analysis measures	Factor 1	Factor 2	Factor 3	Factor 4
Eigen values					
	Eigenvalues per Factor	7.053	3.093	2.010	1.304
Variance	Cumulative Variance Explained	49.92%	71.80%	86.03%	95.26%
Cronbach Alpha:	Overall: 0.87 Per Sub-Index:	0.87	0.73	0.84	0.54

Factor 1 accounted for nearly half (49.92%) of the variance of the Urban Insecurity Index. As hypothesized, Factor 1 represented a grouping of indicators that described a population, which is predominantly Black, and exposed to a convergence of structural issues. These issues were specific to disparities or inequalities in **1)** adequate or advanced education, **2)** high wage employment and **3)** asset wealth. These measures thereby captured structural inequalities, suggesting a crucial lacking of specific populations to structural factors important to building a livelihood and ascertaining and protecting assets, as in the case of rebuilding from Hurricane Katrina. The indicators loading most heavily on the factor of Structural Inequality were: Percent of population Black, Percent population over 25

without HS Diploma, Percent population over 25 with Bachelor's degrees, Percent of Employed Working in Service Industry, Rate of Law and Doctor Offices per population, Ratio of Blighted Houses to All Houses and Rate of Homes valued less than $150K to total homes. Taken on its own, the sub-index of structural inequality is a reliable measure with a Cronbach's alpha of 0.87, as shown in Table 5.

Factor 2 offered an additional 21% to the explained variance, deepening the construct of Urban Insecurity by including measures that describe specific dimensions of economic poverty leading to deprivation, defined as the "the consequence of a lack of income and other resources, which cumulatively can be seen as living in poverty"(Townsend, 1979). These were identified as Rent to Income Ratio, Percent population Unemployed, Percent population Below Poverty Line, Percent population Receiving Public Assistance, Median Income for 12 months, Percent Home Owners vs Renter and Jail Expenditures per population. Factor 2 had a moderately high Cronbach's alpha of 0.73 but not reaching the cut-off point to represent an independent index as with Structural Inequality.

Factor 3 provided an additional 15% to the explained variance focusing on measures of disorder, specifically the Rate of Felony Violent Crimes to population, the Rate of Property Crimes to population, the Rate of Misdemeanor Crimes to population and the Rate of Alcohol Outlets to population. Similar to Factor 1, the sub-index of crime and alcohol was a reliable index in this sample, with a Cronbach's alpha of 0.84.

Finally, Factor 4 elucidates a dimension of insecurity related to female hardship, providing a further 9% to the index and implying a spatial distribution of family disruption through the loss of a male head of household female-headed households. This factor loaded on Percent Households headed by Single Females, Percent population under 18 years old and Percent of children attending Public school. With the lowest Cronbach alpha (.54), Factor 4 is also not a reliable, independent measure.

Because the CFA uses the interactions of loading within the correlation matrix, factors that do not load at an eigenvalue above 1.0 are therefore less likely to be connected to the latent construct of Urban Insecurity. However, it is worth noting that in preliminary analyses using Factor Analysis and Principal Components analysis the following indicators: Percent population using a Car for Work, Percent population using Public Transportation for work and Percent House Owners to Renters consistently loaded as an 5th Factor with an eigenvalue greater than 1.0. Together this three-indicator factor described a state related both to mobility and asset ownership (i.e. not owning a house or a car). In the CFA, the factor received an eigenvalue of only .49 and .44, below the mark of consideration for the Urban Insecurity Index.

Of the proposed indicators, those not retained are listed below:

1) Percent population living in Crowded housing

2) Percent population using a Car for Work

3) Percent population using Public Transportation for work

4) Percent population as Opportunity Youth

As a final step, the Urban Insecurity Index was then calculated as the sum of the z-transformed indicators from each sub-index as seen in Table 5. Each indicator demonstrated to underlie a construct or factor of Urban Insecurity was z-transformed, or standardized at zero by subtracting the mean from each block group measure and dividing by the standard deviation. The desired result was that of the 21 indicators, z-transformed indicators had a mean of 0.000, a standard deviation of 1.00 and a range of (-3.00 to +3.00). However, in the cases of indicators that had unusual concentration patterns as with violence, alcohol outlets or blight, the array from zero was generally irregular, with a mean ranging from -0.000 to .139 and a standard deviation from 2.13 to 5.93. This skewing apparent in the sub-indices z-scores and subsequently in the overall Urban Insecurity Index, was originally intended to account for differences across microenvironments.

Table 7:
Z-transformed descriptive statistics of the standardized factors of the Urban Insecurity Index

Overall Index and Sub-indices Z-scores	Observation	Mean (standardized at zero)	Standard Deviation	Confidence Interval		Cron-bach Alpha
Urban Insecurity	476	.138	5.93	-19.12	17.21	0.87
Structural Inequality	489	.000	2.75	-6.20	8.93	0.87
Concentrated Deprivation	476	.050	2.60	-7.89	6.80	0.73
Crime and Alcohol	489	-.000	3.33	-2.61	22.71	0.84
Female Hardship	489	.000	2.13	-6.18	6.27	0.54

Following standardization, the overall distribution of security in Orleans Parish can be considered observably imbalanced regarding the distribution pattern of Urban Insecurity. The left side of the distribution of Urban Insecurity depicted in Figure 5 shows a less than normal distribution of Orleans Parish that are considered secure. The block groups, or neighborhoods, with the highest security in all measures are quite different from those with the next highest level of security. Below in Figure 6, the histogram depicting areas of very low insecurity to increasing insecurity (from negative to positive numbers) demonstrates an aggregation of the most secure populations as being distinctly more secure than those in the next groupings. For example, very low insecurity (-20 to 10) represents the smallest grouping, and low insecurity (-10 to -5) and moderate insecurity (-5 to zero) show distinct groupings. On the contrary, the groupings of those above zero demonstrate an incremental increase in levels of insecurity. This phenomenon will be explored in more depth in the section on Local Spatial Autocorrelation of Block groups (see section 2.4.3).

Figure 5:
Histogram of the Urban Insecurity Index to determine Normal Distribution
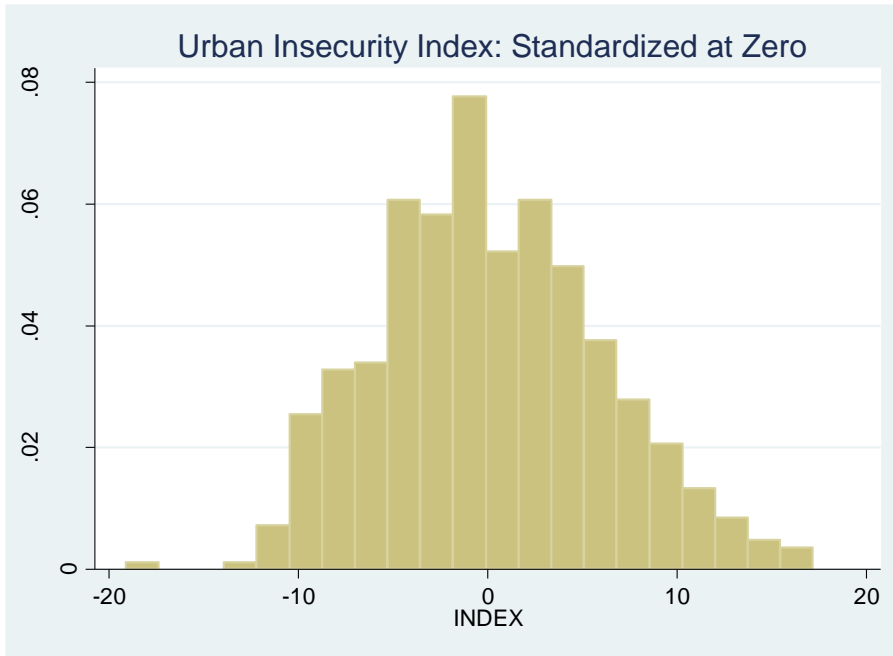
2.4.2 Mapping and Spatial Analysis

2.4.3 Mapping the Urban Inequality Index

A polygon map, created in GEODA for the Urban Insecurity Index is pictured in Figure 8 and reveals multiple configurations. One is a 'latticed pattern' were Very Low Insecurity and High Insecurity exist proximal to each other. Cluster patterns emerge as seen in Figure 6 where Urban Insecurity is mapped for Orleans Parish. A cursory look at the indexed map reveal areas of Very Low Insecurity appear as generally proximal to areas of Low Insecurity, areas of Moderate Insecurity scattered throughout and areas of Moderately-high Insecurity generally proximal to areas of high insecurity. Beyond these large patterns there are many microenvironments that demonstrate a 'latticed' configuration where Very Low Insecurity occur next High Insecurity, this being an important part of the original

hypothesis and gives convincing evidence for a block group approach for ecological analysis. While the cluster patterns provide evidence on the distribution and severity of Urban Insecurity throughout the city, measures of significant clustering are needed however, to determine if clustering occurs by chance.

Figure 6:
The spatial representation of Urban Insecurity by Level of security Across Orleans Parish

	Very Low Insecurity	(-19.1 to -4.96)
	Low Insecurity	(-4.96 to -1.54)
	Moderate Insecurity	(-1.54 to 1.19)
	Mod-High Insecurity	(1.19 to 4.96)
	High Insecurity	(4.96 to 17.2)
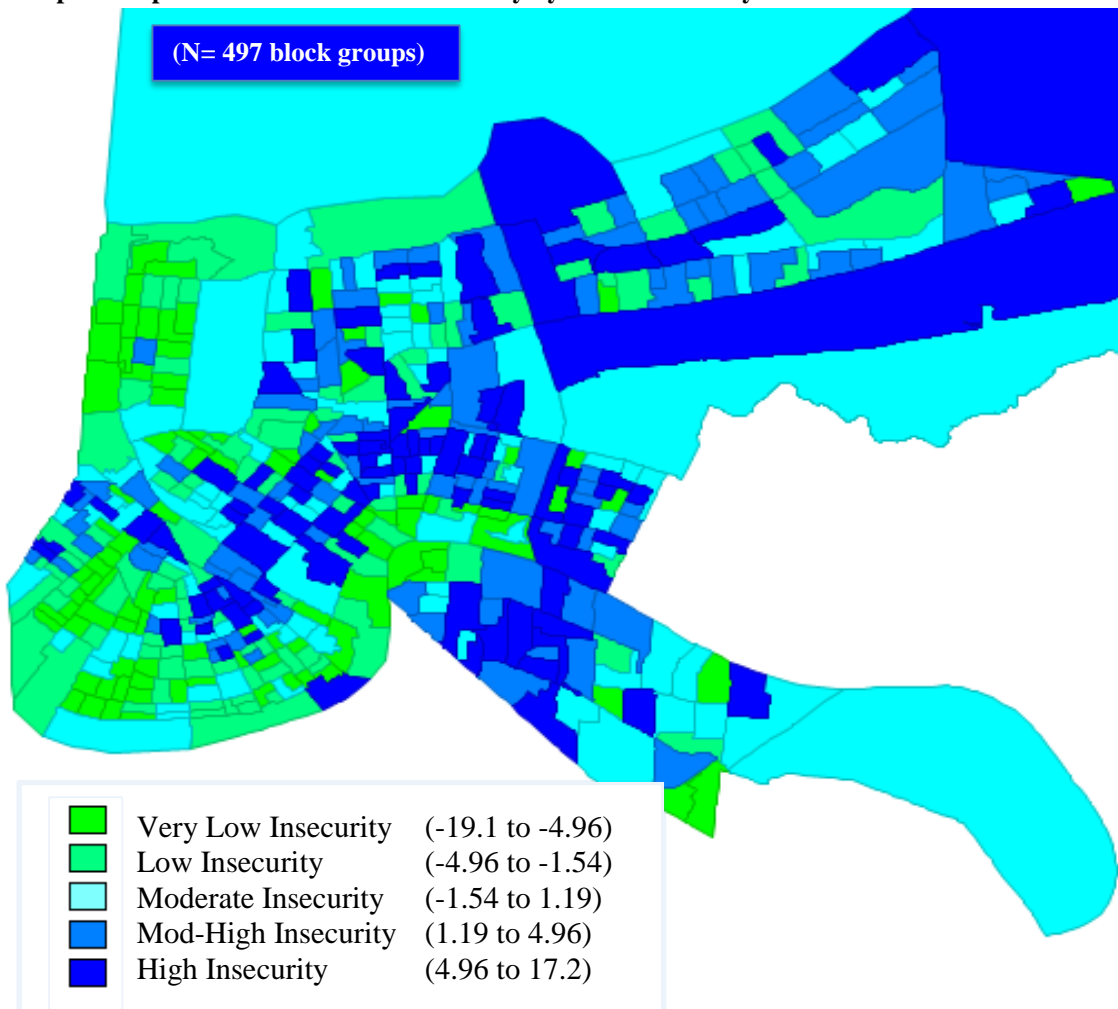
2.4.3 Spatial Analysis of Urban Insecurity and Sub-indices

Clusters of Urban Insecurity found in Orleans Parish were shown not to occur randomly, exhibiting significant overall clustering (z=11.25; p < 0.001) based on the Global Moran's test and using 999 permutations for randomization. Secondly, when subject to the Local Moran's I test (also using 999 permutations for randomization) significant clustering occurred with p values ranging from 0.05 to 0.0001. In Figure 7, clusters of areas of high Urban Insecurity appear in red and Low Urban Insecurity in blue. Transitional colors represent areas where high insecurity occurs next to low (light red) and vice versa, when low insecurity occurs next to high (light blue). Though not representing a large proportion of the overall clusters (27 block groups of 497 or 0.05%), the dispersion of transitional areas directly supports the hypothesis of Orleans Parish as having a latticed socio-economic structure where security and insecurity occur in close proximity to each other. This is easily visible in the LISA Cluster map for Urban Insecurity seen below in Figure 7.

Figure 7:
Local Indices of Spatial Autocorrelation in Urban Insecurity in Orleans Parish[6]
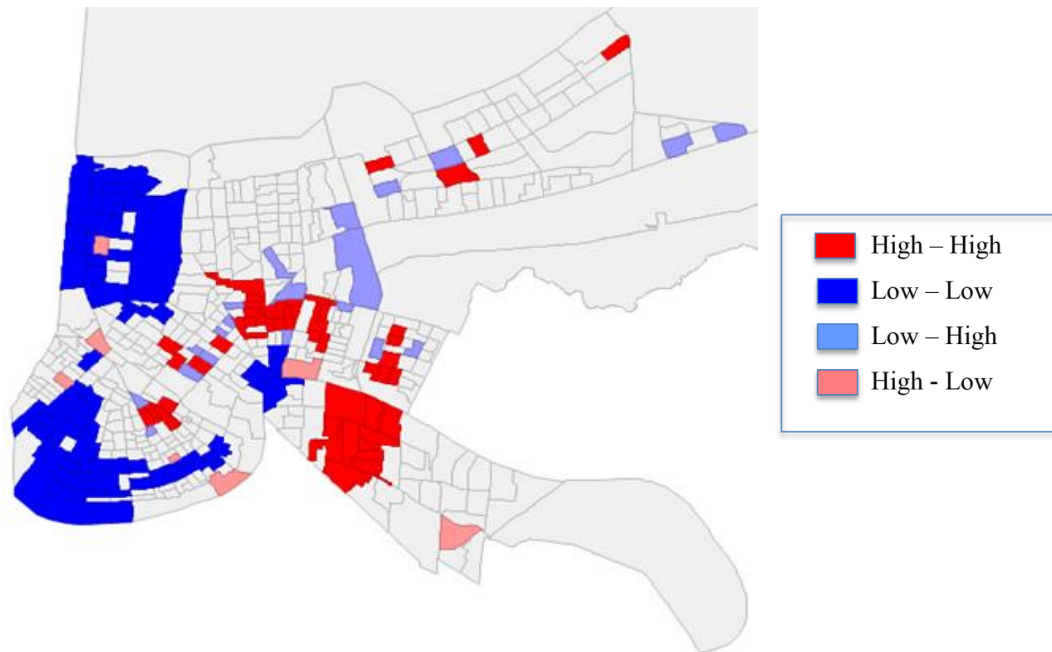
For Urban Insecurity and for each sub-index, Table 5 below shows the frequency and percentage of non-significant clusters and significant High-High, Low-Low and Low-High and High-Low clusters, with their corresponding p-values. There is clear evidence of significant spatial clustering for all sub-indices with the exception of Crime and Alcohol, which was not significant. Regarding Urban Insecurity, significant spatial clustering of occurred among 31.8% of all block groups (p value = 0.001). Spatial autocorrelation patterns depicted in Figure 7 show 54 block groups (10.8% of 497 block groups) with high insecurity clustered with other high insecurity block groups . Similarly, 15.5% of block

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[6] used a Local Moran I autocorrelation analysis with Fixed Distance of conceptualization with a threshold distance of 3960 feet, which is nearly 3/4th of a mile

groups were low insecurity clustered with other low insecurity block groups. The spatial autocorrelation map (Figure 8) show five distinctive High-High clusters of insecurity and three large, areas of Low-Low clusters that are relatively geographically isolated from each other with areas of Low-High and High-Low insecurity interspersed amongst the two. These however account for only 3.21% to 7.44% of all clusters.

Table 8:
Description of Orleans Parish Urban Insecurity LISA cluster map by Factor and Cluster Type, with measures of significance

Block group Clustering	Urban Insecurity	Structural Inequality	Deprivation	Crime and Alcohol	Female Hardship
Not significant	**339** (68.2%)	**302**(60.8%)	**365**(73.4%)	**444** (92.7%)	**370**(74.4%)
High – High	**54** (10.8%)	**73**(6.81%)	**39** (10.7%)	**19** (3.82%)	**51** (10.3%)
Low – Low	**77** (15.5%)	**106** (21.3%)	**56** (11.3%)	**6** (1.20%)	**48** (9.66%)
Low – High	**20** (4.02 %)	**11** (2.21%)	**26** (5.23%)	**12** (2.41%)	**12** (2.41%)
High – Low	**7** (1.41 %)	**5** (1.00%)	**11** (2.21%)	**16** (3.22%)	**16** (3.22%)
Total BGs	497	497	497	497	497
p value	**.001**	**.001**	**.001**	**.258**	**.001**
z-value	11.83	21.44	8.85	.6114	9.17

Overall, in observation of following Spatial Autocorrelation maps (Figures 8 – 12) there was a distinct pattern of areas that were geographically 'safe' or 'isolated' from several types of vulnerabilities. As opposed to the Urban Insecurity Index map (Figure 6) where a latticed pattern of high and low insecurity occurs throughout, with clear clusters of like areas. Spatial autocorrelation mapping determines 22.6% to 39.2% of all block groups are statistically significant clusters of any type. Significant clusters of high insecurity to high insecurity areas range from 6.8% to 10.8% of all block groups and low insecurity to low insecurity areas range from 9.6% to 21.3%. The rare cases where areas of high and low

insecurity significantly cluster (Low-High) range from 2.21% to 5.23% and (High-Low) range from 1.00% to 3.22%.

Figure 8: LISA Cluster Map for Urban Insecurity

Figure 9: LISA Cluster Map of Structural Inequality

Figure 10: LISA Cluster Map of Deprivation

Figure 11: LISA Cluster Map Crime and Alcohol

Figure 12: LISA Cluster Map of Female Hardship

High – High
Low – Low
Low – High
High - Low
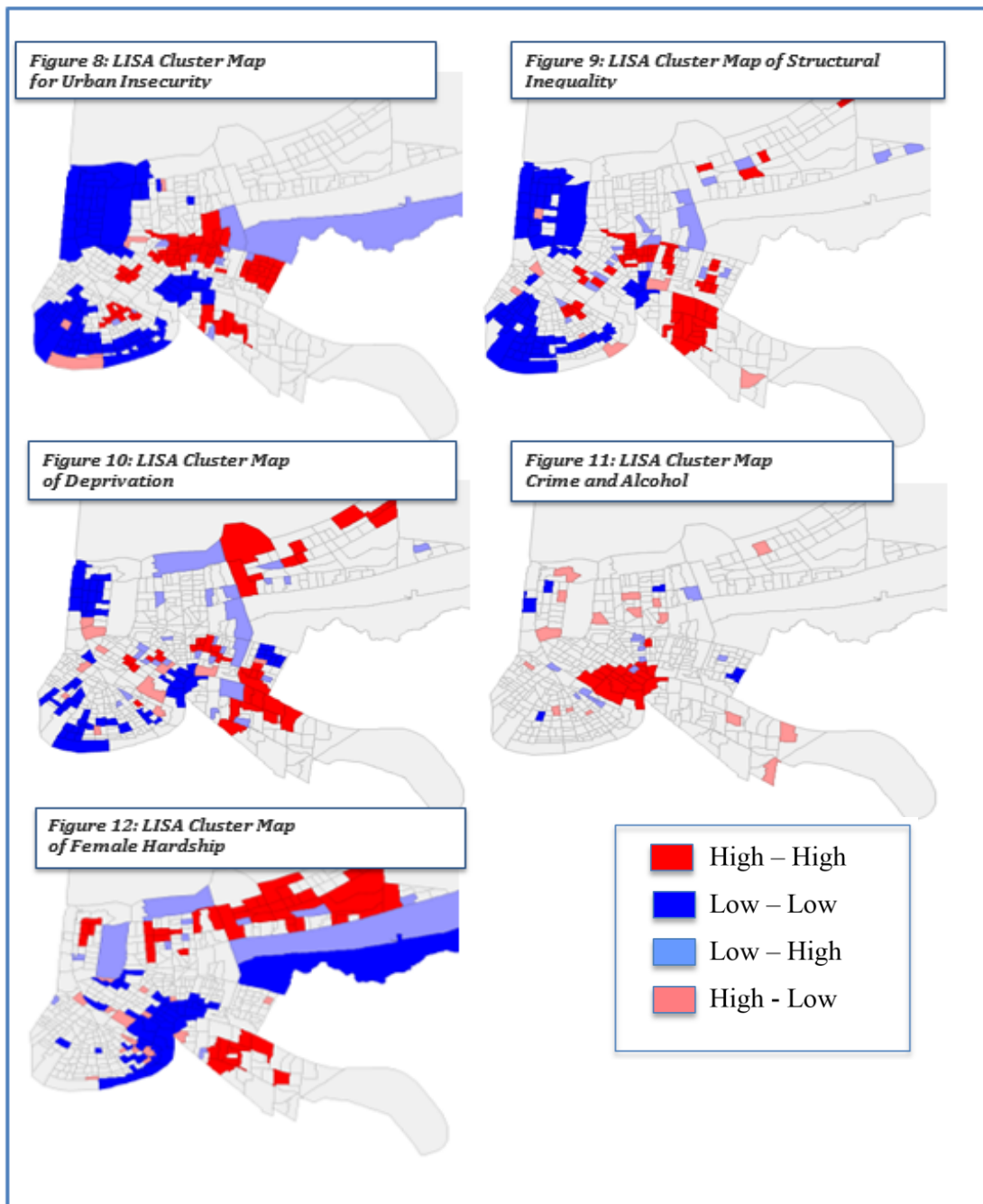
2.5 Discussion

The focus of this research was to expand upon the previous research using spatial techniques to map and analyze poverty and disadvantage as they relate to crime. The primary finding was the verifiable presence of Urban Insecurity, from very low to high, throughout an urban environment. In these areas of high insecurity, predictive values were applied for the constituent factors of Urban Insecurity, being led by Structural Inequality, Concentrated Deprivation, Crime and Alcohol Outlet density and Female Hardship, with eigenvalues that explain up to 95% of the variance between block groups (49.92%, 71.80%, 86.03% and 95.26%, respectively). The Urban Insecurity Index had an exceptional Cronbach alpha score of .87 regarding index's internal reliability, with two sub-indices with Cronbach alpha's also surpassing the cut-off point of .81 --Structural Inequality and Crime and Alcohol Outlet density. For this reason, all analyses included the sub-indices. The Urban Insecurity Index, the Structural Inequality Index and the Crime and Alcohol Outlet Density Index have enormous potential to assist in understanding and mapping the many phenomena of disparity disproportionate access and socio-economic characteristics. Finally, spatial autocorrelation techniques allowed for the visualization of areas of statistically significant clustering of like areas. This gave a first ever depiction of areas most affected by Urban Insecurity and the sub-indices, which may have intense policy implications in addressing vulnerability at the level of microenvironments.

Sampson's early work on Concentrated Disadvantage used reductive factor analysis, determining unemployment, population below the poverty level, population accessing

public assistance, number of female headed household and children Under 18 years old could predict crime as an index of Concentrated Disadvantage (Sampson, et al., 2008). Messer's Deprivation Index approaches a more dynamic vision of poverty extending the notion that measuring deprivation caused by chronic and severe poverty at the neighborhood level produced a strong predictor of specific health outcomes, i.e. low birth weight (Messer et al., 2006).[7]   This work has been advanced by Peter Townsend in the United Kingdom who addresses multiple dimensions of deprivation, with the 'Index of Multiple Deprivation', which explores new dimensions: *Health Deprivation & Disability, Crime, Barriers to Housing and Services* and *the Living Environment* along with more traditional measures of *Income, Employment, Education, Skills and Training* (Townsend, 1979).

In the broader sense, most international indexes such as the Demographic Health Survey (DHS), the Living Standards Measurement Survey (LSMS) and the Women's Empowerment in Agriculture Index (WEAI) are typically more explicit and dynamic in the breadth of their data collected. These are most often oriented towards specifying multiple assets types and the strategies developed to use them (Food and Agriculture Organization of the United Nations, Rome and International Labour Organization, 2007). These survey tools routinely explore the coping strategies to micro, seasonal and major shocks and are

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[7] Eight indicators constituted the Messer's Deprivation Index: percent of males in management and professional occupations, percent of crowded housing, percent of households in poverty, percent of female headed households with dependents, percent of households on public assistance and households earning $30,000 per year estimating poverty, percent earning less than a high school education, and the percent unemployed.

capable of elucidating various types of capital or exchanges, such as the exchange of social capital (between individuals and groups) for natural capital, which includes livestock and land.

These type of surveys have been the most instrumental in informing the Urban Insecurity Index, as opposed to traditional poverty-oriented indices, stemming from a core hypothesis derived from the international humanitarian community literature. Specifically, the Urban Insecurity Index aims to examine insecurity as a direct consequence of identified macro, mezzo and micro-level factors such as marginalization, under-institutionalization, high unemployment, high populations of disengaged youth, etc. Having established American cities as capable of exhibiting the same macro, mezzo and mico-level conditions observed 'active non-political armed conflict zones', this research sought to demonstrate microenvironments of insecurity in domestic settings. The index proved sufficiently robust to identify the indicators chosen to represent insecurity, with high reliability (Cronbach alpha = 0.87) but with some surprises, including two sub-indices that demonstrated high reliability (Structural Inequality and Crime and Alcohol with a Cronbach's alpha of 0.87 and 0.84 respectively).

As expected, the Urban Insecurity Index highlighted the intensity of Structural Inequality as a primary driver of insecurity, with 50% of the cumulative variance of total Urban Insecurity attributed to Structural Inequality. These factors were also the only two to have statistically significant overlap using spatial autocorrelation regression (p value < 0.001).

An important feature of Structural Inequality is the representation of the 'intersection of hyper racial and socioeconomic segregation', a phenomenon also observed by Messer, Sampson and Townsend regarding the distribution of access to the means of wealth acquisition and building being substantially unequal among racial minorities (Messer et al., 2006). The fact that race loaded heavily and persistently with inequality is demonstrative of a 21st century type of segregation whereby the means of total participation in society is limited for a subpopulation, as would happen with refugees, ethnic minorities, internally displaced persons or persons of the low economic class.

New Orleans, as a smaller city, has a compact and distinct distribution of predominantly white and Black residents, with few Hispanic and Asian residents. The Racial Dot Map, developed by Dustin Cable at University of Virginia (Figure 13) dramatically confirms New Orleans as deeply segregated city even within its physically small space. Contrasting the definitive segregation observed on the East bank, the West bank of the Mississippi River, which tends to attract working class families employed by the many refineries along the river, reveals a racially diverse population living together. The city's population dynamics has experienced intense changes in recent years regarding the intensity of post-Katrina gentrification. The racial demography of the city regarding Black home ownership however implies the deep entrenchment of an under-institutionalized population, even without the means to education and advanced employment accessible with advanced degrees.

Figure 13:
The Racial Dot Map, 2010 demonstrates a near perfectly overlap of Structural Inequality with Race
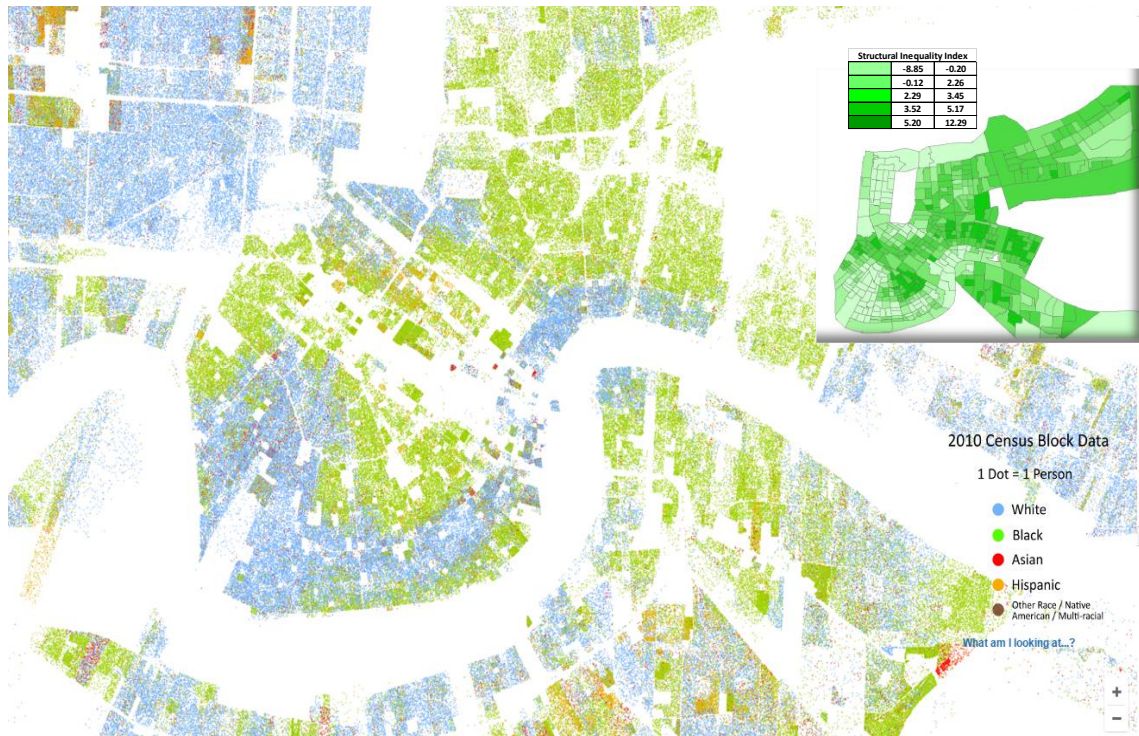
Ultimately, the results of this study are consistent with results found in previous literature concerning the underlying factors driving Urban Insecurity, found mostly in the global context (Muggah, 2012, 2015). Of significance, these findings may have a potential alignment with those gathered regarding the 'Pro-Poor' initiatives in cities across of Brazil, Mexico and Columbia. In Brazil, the architecture of a decade worth of government-led policies attacked the following sectors in order to enact a rapid remediation of poor and marginalized communities experiencing blatant Structural Inequity. By addressing issues around Human Capital, Infrastructure, Share of Households with Children, Ethnicity, Gender, Economic Sector Composition, Unemployment and access to the Formal Sector,

'Pro Poor Growth' observed in cities like Rio de Janeiro and San Paolo, is capable of generating significant and positive changes among affected populations. Of these, access to quality education, reasonable paying jobs for disengaged youth appeared to have stronger impacts than infrastructure strengthening and other mechanisms to re-institutionalization populations into the formal economy (Menezes-Filho & Vasconcellos, 2004). The salient point being that addressing Structural Inequality also significantly impacted Urban Insecurity while bringing affected populations out of their previous poverty status (Gutierrez et al., 2013; Lamb, 2010; Peres et al., 2012).

Another important pattern that emerged from the Urban Insecurity Index, also distinguishing it from other indices, was the relative strength of the block group approach at explicating microenvironment of security. The granularity of this study is novel, particularly referring to **1)** the use of block group -level data, **2)** in the notably dense City of New Orleans and **3)** exploring Urban Insecurity in the American microenvironment context. This study suggests that ecological studies, particularly concerning cities with more heterogeneity among its residents may require analysis at the smallest possible level of aggregation, followed by confirmation and visualization techniques using Global and Local spatial autocorrelation techniques. This would avoid the aggregation of areas of concentrated disadvantage being 'averaged-up' with areas of concentrated abundance. This ecological issue was especially applicable in the New Orleans context due to the historic precedence of Black home ownership in small collections of neighborhoods. These are in fact uncommon in the context of the American city, and stem from the French and Spanish

slavery and post-slavery practices (Campanella, 2006). Ownership gains were furthered by the early inclusion (i.e. open trade of goods and services) and/or exclusion of Black residents from economic activities (i.e. segregation and Jim Crow laws stimulated thriving Black-owned/Black patronized businesses) (Carpenter, et al., 2010).

As seen in Figure 14 below, security occurred in a diffuse or 'latticed' manner across the city but in discernable clusters. However, when using Global and Local spatial autocorrelation techniques, greater discernment of concentrated areas of insecurity reveal multi-vulnerable microenvironments, which for Urban Insecurity and all sub-indices but Crime and Alcohol had a statistically significant non-random pattern of clustering (p < 0.001).

Figure 14:
Observed clustering and local spatial autocorrelation of Urban Insecurity
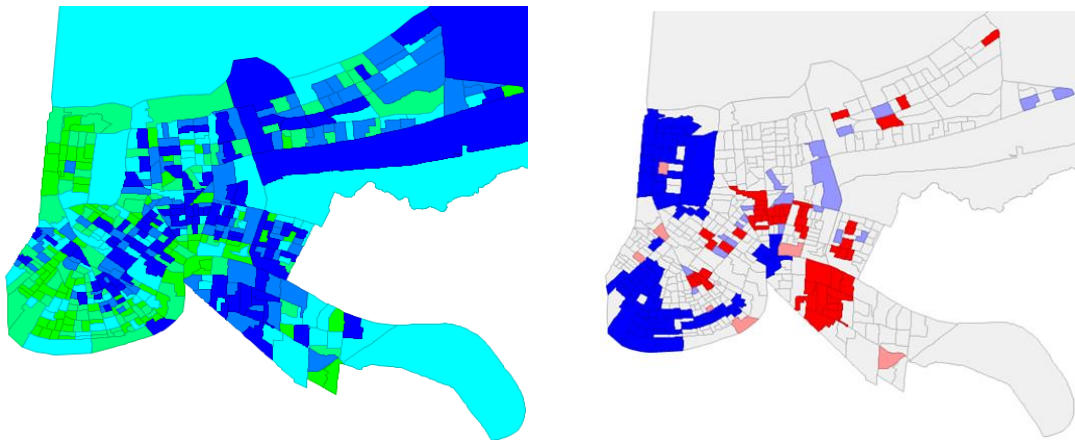
The technique of spatial autocorrelation allows for greater geographic accuracy in pinpointing the specified conditions, in this case, areas not only experiencing the highest and lowest levels of Urban Insecurity along with block groups proximal to these

concentrated environments. Further analysis will be needed to determine if there are noteworthy attributes to areas that occur next to areas of high-high and low-low insecurity. These however constitute between 3.2% and 7.4% of total block groups. In which case, the first inquiry in this regard would be to establish the important differences between high-low and low-high areas from all areas.

2.6 Limitations

While there are several advantages to the study presented, there are important limitations to acknowledge. Regarding the analysis, a primary limitation is the cross-sectional nature of this study. With a lack in temporality, the research is unable to present these relationships in both space and time. However, due to the novelty of the concept and the existence of ACS data dating back to 2007, it will be possible as a potential future study to look at the relationship of all Urban Insecurity indicators over time to determine important shifts in the Index over time. Additionally, the data were available for certain years but with limited consistency across indicators. For example, nearly all of the data point derived from the ACS represent 2009-2014. However, other data derived from North American Industry Classification System (NAICS) represented data from 2015, the Department of Code Enforcement used data from 2012, and Crime Data were taken from 2013 reports. For this reason, there are many be several unexplained incongruities in the data, whereby a number of causal assumptions that cannot reliably be made.

Furthermore, there is the issue of subjectivity in the naming of the latent variables. It is possible that the latent variable of Urban Insecurity does not in fact refer to Urban Insecurity as it has been defined in this work; rather it might be referent to several systemic types of economic, racial and social marginalization. However, because this research is novel and uses internationally-generated constructs applied to the New Orleans context, there is room for generating new constructs. Another deeply important issue is inaccurate reporting for the Census. One major expected source of imprecision comes from the trend of under-reporting in the low-income areas. This concern aligns with the hypothesis that in lieu of a formal economy income source, many in marginalized settings, with high un- or under- employment and high crime might be using an informal economy to make a livelihood. The income and poverty values did not seem inaccurate throughout the course of the study. The issue was more predominant regarding Percent of the population Unemployed. It might be worthwhile to reassess how many residents were captured in this metric do to the status of actively seeking employment, and how many were unemployed and not seeking employment.

Finally, gentrification may be a potential confounder, due to the distortion presented by recent developments in areas of traditionally low income housing proximal to high income housing. As gentrification brings an influx of middle to upper class residents to traditionally poorer areas, some expected measures for Urban Insecurity might be blurred as they are in flux (Boggess & Hipp, 2014).

2.7 Strengths

Despite the limitations, there are several strengths to the current analysis. To our knowledge, this is the first Index of domestic Urban Insecurity. Additionally, using the Block group approach provided a level of granularity not seen in similar studies. Therefore, the research presented in this dissertation offers scholars, public health professionals and government a new way of defining urban pathology. The advance presented points to larger societal constructs operating in the smaller geographic units of Block groups, than has been suggested in earlier research (Sampson et al., 1997), which provides important insights policy and intervention. Ecological models, going back to the Chicago school, focus on broad urban units for example the 'working man zone' and 'zone in transition' (Paynich et al., 2010; Burgess, 1925). Other studies perform their analyses at the Census track or county level. Using Block group may thereby may offer a better explanatory model for Urban Insecurity than earlier approaches. Subsequent research building on these insights may further illuminate the etiology of a variety of behaviors both in reaction to or in generating areas of urban insecurity this research will have. This implication on the general field of security and security-building by defining inter-relationship between map variables and areas of intensities, developing qualitative portraits of neighborhoods characterized by Urban Insecurity and creating interactive research models among Urban Insecurity variables (e.g. transportation, family structure employment, education, poverty)

2.8 Conclusion

To summarize, the development of an Urban Insecurity Index generated in-depth understandings of dimensions of insecurity not explicit in other literature. Using Common Factor Analysis on block group -level data was highly beneficial to the process of explicating Urban Insecurity because the resultant factors accurately and reliably established and characterized microenvironments that were definable, distinct, non-intuitive and interactive between each other. The primary finding taken from this research imply that Urban Insecurity may be primarily driven by Structural Inequality. This factor was characterized by a number of chronic inequities that reflect differential access to the basic mechanisms needed to enter into formal societal structures (education, gainful employment, credit or sufficient income to save, mobility, etc). In theory, once barriers to these mechanisms are sufficiently dismantled and engaged by affected populations, areas of insecurity may self-resolve. As with the examples mentioned earlier regarding Brazil pro-poor policies, the re-institutionalization of marginalized people was a qualified success using these techniques, with the caveat that the government should be the critical stakeholder in reversing critical structural inequities.

This work is important for future research in all areas of spatial inquiry, domestic and international development, public health efforts and those working to decrease criminal activities and violence. This is due to the process of the analysis as well as the resulting index. Firstly, it is possible to lose sight of the problems existing in a microenvironment when it is surrounded by more affluent areas. In which case, it is key to consider the level of aggregation used when using geo-located data. Mistakes can also be made in the

assumption that domestic scenarios are unrelated to international issues. Generally, there is a hubris attached to this assumption. However, as countries continue to develop at rapid pace; those in international settings have to content with high-income, middle-income and low-income country issues sometimes simultaneously. It is of pronounced importance that domestic policies consider international policies for complex problems, happening domestically, but just under another name.

Future research in this field is expected to grow. As more cities and countries began to construct their systemic strategies to dismantle the conditions that lead to Urban Insecurity, more and more stories of the social processes and pathways encountered will inform new efforts to address Urban Insecurity in these places it appears. A separate study on Urban Insecurity's root relationship to Structural Inequality, Concentrated Deprivation and Female Hardship should be considered. Returning to the conversation on social processes, the interrelationship of Urban Insecurity with Collective Efficacy, Social Control and Self-Help may explain the processes of getting to moderate to high insecurity or in contrast low insecurity. A further understanding of the relationship of personal characteristics and choice of neighborhoods can be weaved into research findings into broader public discussions of structural racism, family disruption and gender inequality.

CHAPTER 3, PAPER 2: 'RELEASING INTO CONFLICT ZONES: SPATIAL DRIVERS ASSOCIATED WITH THE RE-ENGAGEMENT OF CRIME AMONG OFFENDERS RELEASED INTO INSECURE AREAS''

3.1 Introduction

Criminals and Insecurity

The discussion of the processes of reversing crime, violence and homicide patterns in an insecure environment is finally occurring in High Income Countries (HICs) as well as Low and Middle Income countries (LMICs), (Muggah, 2010, Rengifo, A, 2009). For example, in a study of 2,309 residents of Louisville, Kentucky and Lexington, Texas, the relationship of sub-cultural forces and drug trade were shown to function together to mediate negative social control, allowing for higher rates of violence and violent crime such as armed robbery. Subsequently, as urban structural conditions were restored, so did the type and magnitude of positive social control needed to reverse robbery trends, (Rengifo, et al., 2009). Similar efforts have transpired in Liberia, Brazil and Columbia, as governments begin to institute pacification and stabilization strategies to combat insecurity generated as structural factors impact individual and community mechanism of survival in constrained environments (Blattman, 2015, Peres, 2006, McIlwaine, 2009, Lamb, 2010). Spatial studies of this phenomenon allow scientists and policy-makers greater 'views' of the terrain and the many responsibilities of the state, including the proliferation of microenvironments of marginalization and insecurity (Messer, et al, 2006, Bensel, 2014, Chauhaun, et al, 2009). As more intensive discussions on the requisite conditions of insecure microenvironments surface (see Paper 1 and Paper 2), there is an expectation that this inquiry will become a high priority area for urban planning, city programming and future development.

Released criminal offenders are a group of special significance due to their intensive vulnerability to insecurity, specifically regarding: **1)** their susceptibility to involvement in

ambient crime and violence (i.e. regaining social capital from criminal acquaintances**, 2)** the immediate need for financial stability, and **3)** the threat of severe poverty without a sufficient level of support and personal infrastructure, (Gutierrez et al., 2013; Kubrin et al., 2006; Phelps, 2013; Steinmetz et al., 2015; Swartz, 2010). The journey of reentry is deeply connected micro- and mezzo- system level environments as offenders seek job markets, social supports and personal safety in order to reestablish themselves essentially from 'ground zero' (Cobbina, 2010; Morenoff et al., 2014; Pryor, 2010). In this way, the pathways of reentering offenders may be used as a highly sensitive metric for the level of insecurity experienced in a space. (Chamberlain et al., 2014; Chamberlain, 2012; Davis, 2014; Kirk, 2012; Martinez, 2010).

Traditional indicators for recidivism are individually-focused and do not consistently take into account ecological vulnerabilities that may directly affect the offenders ability to reengage the community in a meaningful and effective way; those include age, education level, employment status, criminal history, mental health condition, homelessness or housing stability and the absence of social supports (Claggion, 2008). The process of reentry itself is fraught with peril as remaining free in the context of Probation and Parole supervision can be more challenging than commonly perceived, especially if the consideration for Urban Insecurity is made (Miller et al., 2015; Phelps, 2013; Steinmetz et al., 2015). There is a persistent and documented difficulty regarding the meeting all requisite conditions of Probation and Parole, and revoking for reasons of technical violation including:

- reporting when moving residence,

- restitution payments,

- maintaining employment, often with low educational attainment,

- mandatory abstinence of drug use and sometime alcohol use

- compliance with Child Support obligations,

- association with felons

- ubiquitous presence of illegal substances including recreational marijuana

(Phelps, 2013; Stern, 2010).

Moreover, risk of revocation for criminal activities (as opposed to technical violations) has also been studied in-depth. This study will highlight risks as experienced by those criminals who have been detected and punished for crimes by local criminal justice department. The exception in study population is due to the additional vulnerability presented to the offender by encountering the criminal justice system. Within the contexts of vulnerability, issues such as rapid de-capitalization (e.g. loss of financial capital due to court and jail fees and forfeitures, bail payment/repayment, restitution, missed child support), the forced migration from the offender's household and the loss of social capital and relationships make detained and released offenders different from criminals who have not been detected (Cobbina, 2010; Mitchell, Wilson, Eggers, & MacKenzie, 2012; Pryor, 2010). The following issues have been found to significantly increase or decrease return to prison:

- Employment and Debt

- Probation and Parole Supervision sentence

- Intensity of Criminal History

- Family involvement, specifically if married or married with children

- Substance Use or Abuse

- Responsively to rehabilitative programming encountered in or outside of jail

- Evidence-based prison programming in or outside of jail

- Physical and Mental Health

> (James, 2015; Miller et al., 2015; Phelps, 2013; Steinmetz & Henderson, 2015)

There appears to be an exercise of 'survival' that occurs after release (Addicott et al., 1346; Kirk, 2012; Ostermann, 2015; Wilkinson, 2001). It is believed that the same systemic inequity and structural strain that generate crime cultures are exactly those that greet offenders as they release into society (Agnew, 1992; Baron et al., 2002; Kubrin et al., 2006; Lamb, 2010). Many 'self-select' residential areas that are affordable, though those areas are also experiencing marginalization, under-institutionalization and, in some cases, pronounced crime and violence (Claggion, 2008; Wilson, 2011). High crime and violent circumstances have defined the urban landscape in the US, but are concentrated in very specific environments, highlighting the 'parallel society' problem. This segregated experience of crime and violent crime (including homicide) happen almost exclusively in microenvironments that are populated by minorities (Parker, 2000; Paynich el al., 2010). The exception to this is often felony property crime, as criminals 'metastasize' throughout the city to identify suitable victims (Baron et al., 2002).

The goal of this paper is to explore the impact of Urban Insecurity, focusing on a population most vulnerable to it, specifically, released offenders. The aim of the following study is to determine the impact of the insecurity on important reentry outcomes, such as revocation. This study will explore the capacity for Urban Insecurity to hasten the proliferation of crime in the form of revocation (Lamb, 2010; Vilalta et al., 2014).

3. 1.1 Literature Review

Impact of the Drivers of Urban Insecurity on Recidivism

In review of the research literature concerning the proposed drivers of Urban Insecurity, it is important to extract the role of environment on the populations at risk for committing crime and/or recidivating. Research related to those being supervised by Probation and Parole officers and the drivers of revocation among them has traditionally focused on individual-level risk indicators such as criminal history, age at onset of crime, drug use and others (Claggion, 2008; Cobbina, 2010; Gutierrez et al., 2013; Webster et al., 2006). A second occasional tier of protectors from revocation require a strong infrastructure around the offender after release, such as a regular place to live and sleep, consistent employment or employment readiness and social support (Chamberlain, 2012; Swartz, 2010; Wallace, 2015). Underemphasized has been the critical factor of release location and the state of that release location in reference to the reentry client's ability to reintegrate into the formal economy (Bellair et al., 2015; H. E. Grunwald et al., 2010; H. Grunwald et al., 2007; Tillyer et al., 2011)

Sampson notes that Concentrated Disadvantage has been observed to have an effect on not only recidivism but also the type of offense related to recidivism. In a study of 7061 juveniles in Philadelphia, PA, Grunwald found drug offenses were associated with increased Concentrated Disadvantage and losses in social capital. When these occurred together, they were significantly linked with recidivism (Grunwald et al., 2010). Similarly, this study found that a history of drug charges moderated future drug charges by a factor of three and was most pronounced in areas of concentrated disadvantage (Grunwald et al., 2007). A number of studies hoping to link Concentrated Disadvantage to recidivism instead provided mixed findings (Chamberlain, 2012; H. Grunwald et al., 2007; Stahler et al., 2013; Benselet et al., 2014; Tillyer et al., 2011) that pose an interesting quandary regarding the actual drivers of crime, repeat crime and recurring incarceration. These questions are: **1)** Is Concentrated Disadvantage is not on its own a driver but a moderator of crime; and **2)** is Concentrated Disadvantage likely to impact a released offender in need of establishing security or a livelihood through criminal means, i.e. 'wealth-building crimes'? These questions provide more rationale to explore ecological drivers, but with a dynamic lens, rather than assuming a causal relationship (Morenoff et al., 2001).

Additionally, there is an intensifying conversation around the social processes that occur in spaces of marginalization, and types of insecurity that cause changes in Collective Efficacy, Social Disorganization and Social Disorder. The central concept is that constant competition for limited resources in constrained urban environments often lead to crime (Chauhan et al., 2009; Dicksonet al., 2013; Wallace, 2015; Webster et al., 2006). The

resource-poor living in marginalized urban centers who struggle to extract labor and resources from their environment are often forced into a series of choices to engage formal or illicit markets.

In this overall environment, the ability to live in security is inherently compromised. Insecurity with violence produces fear, explained as "the institutional, cultural and psychological repercussion of that violence [with the] outcome of destabilization, exclusion and uncertainty" (ISS-ICRC, 2012). This is an integral part of the definition of Urban Insecurity that is unfortunately difficult to measure; the feeling of being safe outside of your home, hearing gunshots nearly every evening, seeing dead bodies regularly, or having a feeling of hopelessness for the future. This type of chronic community trauma will require serious public health attention as evidence of community trauma is mounting (Purcell, 2007). Urban Insecurity may therefore play a key role in predicting the success of those populations that are vulnerable to economic, social and societal marginalization and subsequently vulnerable to crime. Similarly, other studies showed that place matters as ex-offenders released to areas of concentrated abundance (resource-rich neighborhoods) were far less likely to reoffend (Kirk, 2009; Stahler et al., 2013). In a natural experiment regarding parolee reentry following Hurricane Katrina, it was observed that residential destruction prevented parolees from returning to their original neighborhoods and were significantly less likely to reoffend (Kirk, 2009). However, in a propensity score matching approach, matching individual risk to neighborhood risk, concentrated disadvantage was identified in 137 block groups and divided into degrees of low, moderate and severely

disadvantaged finding neither degree significantly influenced parolee outcomes (Bensel, Gibbs, & Lytle, 2014). As the research evolved, more evidence appears to confirm that this latent variable of Concentrated Disadvantage, while important, does not on its own reliably predict neighborhood crime and or recidivism.

Trigger Risk Factors: Pathways towards Crime, Violence and Rational Actors

Further research offering ecological indicators useful in elucidating the mechanisms driving revocation of released offenders include Spatial Contagion (Stahler et al., 2013);General Routine Theory (Agnew, 1992; Baron et al, 2002); Proximal Criminal Social Networks (Webster et al., 2006); Saturation Points of released offenders establishing residence in a neighborhood – discussed earlier- (Clear et al., 2003); and Trigger Risk Points, which take into account how the saturation of offenders in a neighborhood transform the basis of social control (Stahler et al., 2013). A new discussion of Trigger Risk Factors, defined as situational conditions that can exacerbate the likelihood of violence occurring, adding insight to how areas prone to crime transform to areas generating violence (Moser et al, 2006). These emerging theories refer to processes and pathways that produce changes in the collective functioning of the neighborhood offering to points where micro-societal changes that transform established methods of social cohesion, efficacy and social control occur, many of which shift towards a stance of violence as acceptable (Boggess et al, 2014; Chamberlain et al., 2015)

One such tipping point is the number of offenders released in an area, where the neighborhood becomes overwhelmed by a high number of released offenders (Boggess et al., 2014). When the returnee's numbers are low, the neighborhood's social cohesion and collective efficacy are able to 'control' the behavior of the offender, creating an expectation of adhering to neighborhood values. As explained by Clear and Rose who regard incarceration as 'Coercive Mobility' citing that when the neighborhood takes on too many dislocated offenders (because as a poor neighborhood it is affordable), the protective effects of strong local social networks weaken (Clear et al., 2003).

Also, the process of reentry tests the released offenders attempt to regain a livelihood, which may be cause emotions of anger and frustration also known as 'Anomie' when success or perceived success is not gained. This process is explained by General Strain Theory, when perceptions and experiences of the success do not align and the offender's ability to provide for themselves and dependents (Agnew, 1992). A gap exists between legitimate opportunities for monetary success and actual (legal) societal attainment. The opportunity or 'job' with the lowest cost of entrance, requiring little skill and generally locally available to engage: is drug dealing (George, 1998, Keyes, 2002, Kitwana, 2002).

Small to large groups of peers (and even parents) establish territories in order to enjoin the full business of drug dealing, which includes the purchase of bulk product, and the processing, marketing and street sale of product, all while creating a failsafe to sell without consequence (meaning arrests) (Bellair et al., 2015; Miller et al., 2015). Therein a business

infrastructure is formed, normalized and propagated, wherein Routine Activities theory helps explain how otherwise ethical youth make the rational act to enjoin the informal drug economy. The space and time for offense are generated in or near their home negating the pressure of finding work in unfamiliar or potentially dangerous territories (Yu et al., 2008). With the subsequent replacement of traditional social network for 'street-oriented peer groups', Sutherland's Differential Association theory provides a theorized pathway to engage crime and the social capital that comes of it (Sutherland, 1947).

An important consideration is dignity. In the absence of an acceptable form of financial stability and self-efficacy, the traditional mechanisms of social power must be reformulated (Kubrin, 2005). Within the illicit market, how do these groups manifest power and dominance? Wilkinson (2001) suggests verbal agility, demonstrations of affluence or power over territory, weaponry or reputation are means to status (Wilkinson, 2001). Further research on highly disorganized or 'reorganized' neighborhoods where control is now maintained by extreme violence refers to violence as 'Self Help'. Self Help is described as set of responses to issues that could have involved police, but given the availability of weapons, associations with criminal groups and the willingness to assert power, it is easier and faster for the rational actor in the neighborhood to become the authoritative agent (Kubrin, 2005). This is a clear parallel to the criminal syndicate groups found in Low and Middle Income countries, driving insecurity in those areas (Moser et al, 2006).

Retaliatory killing is an example of implementing Self Help, but there are noteworthy examples where the threat of violence alone keeps social order (Vilalta et al.

2014). An example is when a street drug dealer murders someone encroaching on their territory, in New Orleans they become almost a local hero (Baraka, 2014). It has been noticed in the US urban context, that as conflicts that arise in the neighborhood, they are 'solved' by residents through methods of social control germane to prison life (i.e. disrespect or challenges are met with hyper-violent acts to prove supremacy, reaffirm territory and maintain self-preservation) (Kubrin et al., 2006). A cultural code of maintaining a brutal reputation results in several benefits including local fame and decreased harassment from would-be competitors (Keyes, 2002). Within the Self-Help construct, dispute resolution is based off of presiding social values (as in the example given earlier regarding Brazilian 'tribunals' who decide justice for offenders most often resulting in torture or death. In the New Orleans contexts, shooting is the dominant form of punishment, where automatic weapons have been relied upon to have the full effect (victim death) because a shooting not resulting in death will likely result in a retribution shooting by the victim. Oddly, only an average of 36 percent of shootings resulted in a homicide (Asher, 2015).

Scope of the Study

The inference specified in the above is that the socialization of delinquency and violence is a 'rational act' in an insecure environment. Individuals within this environment who employ violence as a means of attaining and maintaining power, security or stability, might

be considered a 'rational actor' in a constrained environment (Kubrin, 2005). This condition is comparable to a loss of statehood in combat areas. Government institutions (i.e. police) are unable to enforce public safety having lost local trust and rapport due to high numbers of arrests, well-documented harassment and unethical behavior resulting in the federal consent decree. In place of police institutions, neighborhoods take care of their own using a 'street code' (Geller et al., 2006; Wilkinson, 2001).

The relevance of these issues regarding the study of Urban Insecurity and the outcomes expected from released offenders can be thought of as dueling forces. On one hand, offenders have been locked in a predatory environment, with a routine of violent self-preservation. They are released with the expectation of reintegrating into society and gaining a productive livelihood, yet they are released into environments where disorder is rampant and behaviors appropriate to the setting must continue (Swartz, 2010). A primary example of this paradox is carrying a gun. Carrying a weapon for self-protection in an area with a high crime rate can be considered a necessity in some areas, yet, being detected as a 'felon with a gun' is grounds for arrest and revocation.

The following research is intended to determine the magnitude of effect neighborhood level insecurity may have on a particularly vulnerable population. In this study, that vulnerable group was chosen to be released offenders. This cohort by definition have been perpetrators, and likely victims, to urban insecurity (Mooney et al., 2014; Pryor, 2010).

The overall premise that Urban Insecurity is a critical factor in the risk of revocation and has both theoretical and practical importance. The innovation in this approach is to link Insecurity with more systemic factors such Structural Inequity, the consequences of family disruption and several distinct types of poverty, as opposed to only highlighting individual-level criminogenic factors. The research question this study hopes to address is: Does Urban Insecurity have a significant impact on revocation? The purpose of this study is to develop an evidence-base for the responsibility of 'the state' in the production of insecurity. As seen with countries engaging in the processes of re-institutionalizing marginalized populations, improvements in accessing education and the workforce have been significantly linked to improvements in delinquency, disorder and murder. Offender populations have traditionally been perceived as anomalous and deviant members of society, they are rarely perceived as primarily having unequal access to essential resources that are intrinsic to the proper engagement of citizens with its society, specifically education, employment and the mechanisms of building wealth (Elo, Mykyta, Margolis, & Culhane, 2010). Compounding the issue, is the inability for the released offender to self-select an environment that would be less insecure upon release (Chauhan et al., 2009). As underscored in 'the Million Dollar Block' spatial research, the offender who inhabit marginalized areas throughout his or her lifecourse, had never incurred heavy investments of state resources, except until the moment of incarcerated wherein they 'cost' as much as $30 to $50 dollars a day in corrections costs (Justice Reinvestment, 2009).

3.2 Methods

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3.2.1 Study Design and Population

The study design is a secondary longitudinal cohort study design that utilizes data gathered from a Reentry program for adult offenders performed from April 2012 to July 2014 in New Orleans and Baton Rouge, Louisiana. This Reentry program was funded by the Bureau of Justice Assistance FY2012 Second Chance Act Statewide Recidivism Reduction and Violent Crime Prevention Initiative (CPI), a project to reduce recidivism and violent crime among high-risk reentry clients. The Crime Prevention Initiative (CPI) was initiated to reduce the risk of violent crime and recidivism by targeting high-risk offenders in "hot spot" high crime neighborhoods in Probation and Parole Districts with enhanced supervision standards. Enhanced supervision refers to a difference in the quality and quantity of PO contacts. Regarding quality, CPI P&P Officers were trained in Motivational Interviewing, a technique of establishing the priorties and goals of the client in order to better matchs PO efforts, to offender needs to mutually desired outcomes. Improvements in the quantity of supervision refer to a dramatic shift in the caseload of the CPI P&P Officers going from an average of one Probation and Parole Officer to 150 reentry cases, to one Probation and Parole Officer to 50 reentry cases. The subjects, when released from jail or prison, essentially received a higher than normal number of visits from Probation and Parole officers, in order to determine if greater quantity and quality of supervision impacted recidivism. The benefit of using the CPI study lies in its careful documentation of historical offender risk, place of release and longitudinal data gathered during supervision, which is generally rare in corrections data.

Figure 15:
Map of CPI Control and Treatment Zip Codes

Note: Borders are approximate; some fluctuate by a block or two   Dan Swenson, NOLA.com | The Times-Picayune
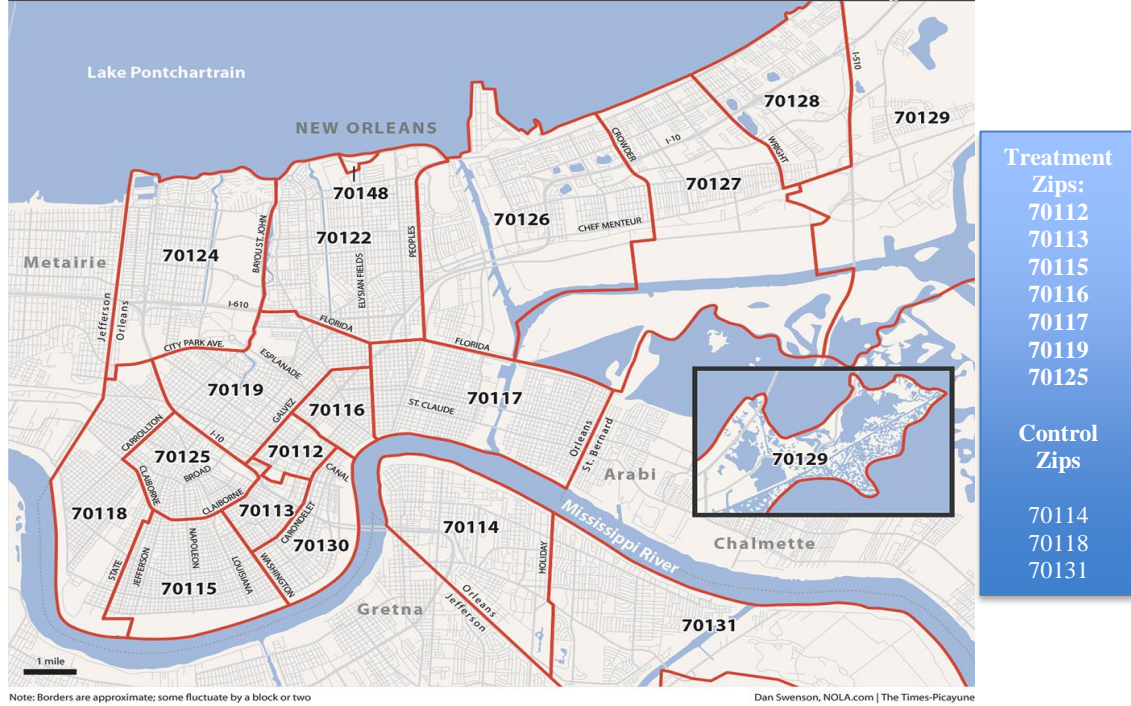
Inclusion Criteria for the CPI program and control groups were chosen specifically on identifiers that historically predict increased risk for recidivism. Potential participants were chosen by DPS&C based on criminogenic history and type of crime. Eligibility criteria included: being an released offender under age 30 who **1)** self-reported or was identified as having involvement in a security threat group (gang, crime family), **2)** had three or more arrests for an offense involving a firearm or crime of violence; or **3)** had three or more felony arrests involving the distribution of drugs.

Once eligibility was established, 1245 released offenders were enrolled in standard or enhanced supervision based on their documented location of release. The treatment of

enhanced supervision was focused in 'hot spot' postal zip codes[8] identified by LA DPS&C to have heightened criminal, violent and homicide-related activity compared to other zip codes. In Figure 7, the map of Orleans Parish zip codes marks those designated as treatment and control areas.[9] All offenders were matched on factors of individual risk using Propensity Score Matching across the treatment and control groups. The factors used include, age as start of detected criminal activity, age as the start of Probation and Parole, education, race, sex, criminal history by type of crime (gun, drug, crime of violence, and combinations of those three) to guard against confounding by demographic factors and criminal history

Table 9:
Descriptive Demographic, Social and Economic Characteristics of Orleans Parish using 5-year ACS Census data, (2009-2014)

Indicators	Category	Total (%)
(n=497 Block groups)		
Total Population		343,829
Race	Black	206,871 (60.2%)
	White	113,428 (33.0%)
	Other	28,021 (6.8%)
Sex	Male	176,743 (48.0%)
	Female	191,728 (52.0%)

[8] These zip codes contained the areas considered by LA DPS&C and P&P to have the worst crime statistics. However, based on the evidence on the distribution of crime throughout the city in addition to the aggregation level of zip code, there was little evidence that confounding on the treatment group will occur.
[9] Treatment: (70112/70113/70115/70116/70117/70119/70125).   Control: (70114/ 70118/70131)

Median Age	Male	34.4
	Female	35.9
Child Dependancy by Household Type	Married	29,364 (38.5%)
	Male-Headed Household	5,926 (7.7%)
	Female-Headed Household	40,733 (53.4%)
		$36,964
Median Income		$36,575
(With Children under 18)	Married	$88,837
	Male-Headed Household	$31,693
	Female-Headed Household	$17,843
Poverty Status (With Children Under 18)	Above the Poverty Level	58.5%
	Below the Poverty Level	41.5%
	Female-Headed Households	58.8%
	Employed	164,119 (54.7%)
Percent Employed	Unemployed	21,497 (7.2%)
	Not in Labor Force	113,557 (37.9%)
Health Insurance Coverage	Covered	298,699 (82.2%)
	Uncovered	64,870 (187.8%)

Retrospective power analysis:

As the sample was predetermined from the CPI study being, a retroactive power analysis was performed to determine if the appropriate number of participants were studied in order to detect a difference in the core study hypotheses at the standard level of statistical significance ($p = .05$). The risk of being revoked with a year of release, specifically in Orleans Parish is historically 18% and increases to 32 - 35% within 3 years[10]. The CPI study population do not differ from the general populations in that they were enrolled as **1)** they were released from various correctional facilities with no special programming into the study districts, or **2)** they received Probation sentences in the study district. Study

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[10] Using data from the Department of Corrections for 2012, 2013, 2014 and 2015 1-year revocation rates for offenders returning from Orleans parish to DOC facilities.

enrollment began on December 31st 2012 and ended on December 31 2014, therefore the one year revocation rate was the most appropriate to timeline to assess the impact of Urban insecurity on revocation patterns. The averaged 1-year recidivsm rate for the CPI study group was 26.1% and the population recidivsm rate for offenders admitted from Orleans parish was 18.0%. In order to calculate the statistical power of a study after it had been conducted a post hoc power estimation was performed. This would determine if adequate power was acheieved to detect a difference between the two groups. The power calculation as with the sample size calculation, statistical power uses the baseline incidence of an outcome, variance, treatment effect size, alpha, and the sample size of a study.

The following estimations was used: (p_1: 19%, p_2: 31%),

$$n = 2[p_1(1 - p_1) + p_2(1 - p_2)] \cdot [2.8/(p_1 - p_2)]^2$$

$$n = 2[p_1(1 - p_1) + p_2(1 - p_2)] \cdot [2.8/(p_1 - p_2)]^2$$

$$\text{power} = 83\%$$

It was determined that the appropriate power was reached using the sample of CPI offenders to represent a significant or nonsignificant difference between the study group and the general population, thusly allowing for population-based generalizations to come from the study.

3.2.2 Measures

Outcome Measures

Revocation is the definitive outcome variable regarding reentry studies and the outcome of interst for this study. Revocation can occur for a number of reasons, including new crimes,

pending crimes (which are completely separate crimes than those affiliated with probation or parole supervision and have not yet tried in court) and technical revocation stemming from a failure to comply with the conditions of Probation and Parole. Prevention of revocation is key to the conversation on the reduction of incarceration and the opportunity for prevention or intervention at the point of reentry represents a large cost savings.

Neighborhood Exposure Variables

The Urban Insecurity index is a comprehensive ecological measure denoting an inabilty to sustain a livelihood due to profound lack of important institutional, infrastructural and local resources needed to secure basic needs and pronounced disorder. In a recent study on Urban Insecurity, the City of New Orleans was used as a case study to develop an Index of Urban Insecurity (Singh, 2016). The Urban Insecurity Index produced a spatial depiction of the potential drivers of Urban Insecurity which were hypothesized to be: Structural Inequality, Concentrated Disadvantage (as defined by Robert Sampson's work of the Chicago School) and Social Disorder (as defined by crime and alcohol outlet statistics) (Morenoff et al., 2001; Sampson et al., 2002). The distinction in this work from other vulnerability indexes, such as Social Vulnerability Index (Cutter) or the Standardized Neighborhood Deprivation Index (Messer) was a preferential focus on Structural Inequality and to some extent Structural Racism, playing close attention to areas where the concentration of minorities systemically precluded access to the means of survival and success. Additionally, a highly granular approach was used in the spatial analyses in order to capture the micro-environments, using the smallest geographic level of aggregation, being the Block group.

The Urban Insecurity index was mapped for the entirety of Orleans Parish at the Block group level to determine micro-environments of (in)security. Using a multi-level, or hiearchical model, this study nests individuals (released offenders) within block groups at various levels of Urban Insecurity in order to assess the impact of exposure to reentry outcomes. The study tracks offenders through their residence upon initial release from prison or jail. Offenders are assumed to have been exposed to different levels of insecurity upon release, with an implicit understanding that they have been exposed to insecurity at different levels and during different phases of their life course. The assumption, in this case, is that the insecurity encountered during release has the most important effect on. Block group level variables have been evaluated for their contribution to Urban Insecurity. The Urban Insecurity Index of has been discussed at length in previous research, but the list below describes the indicators used to derive the measure.

Table 10:
The latent variable of Urban Insecurity, by factor and indicator, with block group level means and ranges using 5-year ACS Census data, (2009-2014), N=497

Block group Level	Urban Insecurity Index by Sub-Indices and Indicator	Mean(CI)
Overall Index		
Factor 1: Structural Inequality	Percent of population Black	.616(0.00-1.00)
	Percent of children attending Public school	.147(0.00-0.52)
	Percent population over 25 without HS Diploma	.170(0.00-0.68)
	Percent population over 25 with Bachelor's degrees	.685(0.06-1.00)*
	Percent population as Opportunity Youth	.137(0.00-1.00)
	Percent population using a Car for Work	.529(0.00-1.00)*
	Percent population using Public Transportation for work	.239(0.00-0.75)

	Percent of Employed Working in Service Industry	.272(0.00-0.99)
	Rate of Law and Doctor Offices per population	.935(0.35-1.00)*
	Ratio of Blighted Houses to All Houses	.044(0.00-0.99)
	Rate of Homes valued less than $150K to total homes	.401(0.00-1.00)
Factor 2: Concentrated Deprivation	Percent population Below Poverty Line	.239(0.00-1.00)
	Percent population Unemployed	.076(0.00-0.48)
	Percent population on Public Assistance	.093(0.00-0.53)
	Percent Home Owners vs Renters	.508(0.00-1.00)*
	Median Income for 12 months[11]	.957(.353-1.00)*
	Rent to Income Ratio among Renters	.339(0.00-0.50).
	Jail Expenditures per Block group	.066(0.00-0.45)
Factor 3: Crime and Alcohol	Rate of Felony Violent Crimes to population	.007(0.00-0.25)
	Rate of Felony Property Crimes	.047(0.00-0.99)
	Rate of Misdemeanor Crimes to population	.052(0.00-0.99)
	Rate of Alcohol Outlets to population	.005(0.00-0.22)
Factor 3: Female Hardship	Percent Female-headed households	.214(0.00-.828)
	Percent population of Children Under 18	.256(0.00-.766)
	Percent Employed taking Public Transportation to Work	.092(0.00-.566)

Individual Level Variables

Individual level factors have been included to explore the magnitude of their significance in predicting recidivism in concert with Urban Insecurity variables. Individual-level Indictors of risk used in this study include traditional demographics such as race, gender and age however a number of indicators are conventional to analyze the risk of recidivism. Educational attainment is recorded as the last grade completed. Type of supervision, referring to Probation or Parole, is important regarding the ease at which a recovation can occur. Revocation via parole is the easiest to administratively to enact Supervision length

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[11] Income was measured as the median income, divided by 1,000,000 and finally reverse coded.

is derived from the original sentence time. Drug Use as a measure of any possitive drug tests after release. Employment was gathered longitudinally over the course of 14-month data collection period. The CPI program and tracked released offenders on a monthly basis for part-time to full-time employment. A percentage was derived of all months for which the offender was released, and of those, how many he or she was working at least part-time.

Information on recidivism risk is ascertained using three types of criminal history data. Offenders had documented **1)** any crime committed under the age of 17 establishing an early-onset of criminal activity, **2)** gang membership, either self-identified or identified by law personnel, **3)** documented historical crimes related to drugs, guns or violence. The most dangerous historical behaviors generated the highests recidivism risk category and the lowest behaviors generating the lowest risk category.

Treatment-specific Explanatory Variables

The treatment variable most likely to impact revocation in the study population is the CPI reentry program itself. The initial hypothesis that an improvement in the quantity and quality of Probation and Parole Supervision would successfully decrease revocation proved instead to generate a significant increase in revocation followed by a disctint and significant decrease in revocation as PO contacts increased. There were marked differences between treatment and control groups in the numer of PO contacts and revocation patters. These will be controled for in the regression analysis and by stratifying by treatment condition.

3.2.3   Statistical Analysis

All analyses were performed using SAS version 14.1. Descriptive and bivariate analyses, including chi-square and t-tests where appropriate were performed. Several second level hiearchical logistic regression model were executed using PROC GLIMMIX with the binary variable of 'Revoked' (yes or no) using a crude and adjusted model, (J. Merlo, 2005, 2006; Juan Merlo, 2003). Individuals (first level, n=707) were nested in Block groups (second level, n=277) which represented 55.7% of the total number of Block groups in the Orleans Parish (n=497). Hiearchical models were used to determine the effect of the Urban Insecurity (overall and as sub-indices) on revocation. All independent variables were grand mean centered. The fixed part of the model used the following equation to establish the mean of the outcome of interest: 'revoked'. This was performed by executing an empty (or intercept only) model for 'revoked' for all Block groups using the following model:

$$Y_{ij} = X_{1j} + r_{ij}$$

> Where:
> *Y_{ij} is the outcome for all Block groups across all individuals*
> *X_{1j} is the average outcome across all Block groups, randomly varying intercept*
> *r_{ij} is the individual-level error term for all CPI Individuals*

Recognizing the intercept as the 'Fixed' or essentially the grand mean of the reentry outcome of revocation, in Hierarchical models the standard deviations are separated by both the block group individual levels. These are reflected in the 'Random' part of the

model, perform test including explanatory variables focused on the neighborhood-level variables produced by the Urban Insecurity Index.

$$Y_{ij} = [\gamma_{00} + \gamma_{01}X_{1j} + \gamma_{02}X_{2j} \ldots] + [\mu_{0j} + r_{ij}]$$

Fixed   **Random**

Where:

Y_{ij}
γ_{00} is the outcome for all Block groups across all Individuals: intercept-fixed term
X_{1j} is the average outcome for all block groups
$\gamma_{01}X_{1j}$ are the coefficients for the explanatory variables included in the fixed part of the model, these are listed in Table 4
$\mu 0j$ is each Block group's variability from the overall mean of γ_{00}
rij is Individual's variability from the overall mean of γ_{00}

The percent of variance attributed to the individual and block group or higher was achieved using the **Interclass Correlation Coefficient** (ICC). The ICC is derived by considering a calculation of variance between Block groups (**$V_{BLOCKGROUP)}$** and for variance between release offenders ($V_{INDIVIDUAL)}$ by the following equation:

$$V_{BLOCKGROUP} / V_{BLOCKGROUP} + V_{INDIVIDUAL}$$

The convention for the usage of ICC regarding binary outcomes is described by Snijders (Snijders and Boskers,1999), however in recent literature by Sheng el at, caution is taken regarding the underestimation of clustering. A **Median Odds Ratio** (MOR) is provided as well. The variance partitioning coefficient was developed to help to confirm the percentage of variance attributable to the Block group level and Individual level, using the Snijders standard of 3.29 for individual variance.

An empty model was run for the unconditional or 'grand mean' specific to the block group level random intercept. A crude bivariate model was run using block group level variables (in this case the Urban Insecurity Index and sub-indices) with both continuous and categorical index variables, in order to observe incremental impacts. Finally, a series of multivariate models were run using several individual level variables significantly associated in the literature and in previous CPI analyses with revocation. Regarding the adjusted multilevel model, a number of test were performed to determine the indicators of the CPI populations that were significantly associated with revocation. These individual level variables consistently and significantly predicted revocation. Also a collinearity test was performed using (PROC REG (/tol vif Collin) to confirm. Though continuous and categorical models are presented together, they were run separately.

3.3 Results

3.3.1 Descriptive and Bivariate Analysis

The treatment and control population in the CPI study were released across 277 block groups of a total 497 possible. There was a 35.7% revocation rate across both groups with 18.2% revocation in the control group and 33.4% revocation among the treatment group. Those released were predominantly Black (96.8%) and male (88.9%), also representing a disproportionate proportion of revocations of all demographic groups, with 26.7% Black males revoked as compared to 13.1% white males. Age and education were not

significantly associated with revocation however, the intensity of criminal contacts from before the age of 17 and the number of historical drug, gun and violent crimes increased the likelihood of revocation. On the other hand, employment has a protective effect on revocation.

Table 11.
Individual Characteristics by Revocation Outcomes of Offenders Released in the CPI study

Explanatory Variables related to Individual Risk	Overall N=707	Revoked N=186	Not Revoked N=521
Race*			
Black	684 (96.8%)	183 (26.7%)	501 (73.3%)
White and Non-Black	23 (3.2%)	3 (13.1%)	20 (86.9%)
Sex*			
Male	629 (88.9%)	179 (28.5%)	450 (71.5%)
Female	79 (11.1%)	7 (9.0%)	71 (91.0%)
Age			
15-20	123 (17.4%)	37 (30.1%)	86 (69.9%)
20-25	302 (42.7%)	88 (29.1%)	214 (70.8%)
25 and over	282 (39.9%)	61 (21.6%)	221 (78.5%)
Highest Grade Level Completed			
9th grade and below	192 (27.2%)	64 (33.3%)	128 (66.7%)
10th and 11th grade	292 (41.3%)	80 (27.4%)	212 (72.6%)
HS diploma/GED+	223 (31.5%)	42 (18.8%)	181 (81.2%)
Substance Abuse			
No substance use	332 (47.0%)	77 (23.2%)	255 (76.8%)
Substance use	375 (53.0%)	109 (29.1%)	266 (70.9%)
Employment* (% release months worked)**			
0 – 20%	229 (32.4%)	88 (38.4%)	141 (61.6%)
20% - 80%	226 (31.9%)	68 (30.1%)	158 (69.9%)
80 – 100%	252 (35.6%)	30 (11.9%)	222 (88.1%)
Recidivism Risk* (calculated fr Criminal History)**			
Low	210 (27.7%)	45 (21.4%)	165 (78.6%)
Med	279 (39.5%)	55 (19.7%)	224 (80.3%)
High	218 (30.8%)	86 (26.3%)	132 (60.7%)

As seen in Table 12, revocations among probation supervision were significantly lower than among parole supervision. Of those receiving probation supervision, revocations were

significantly more likely to occur in those with shorter sentences (zero to two years). The highest levels of PO contacts were associated with a significant decrease in revocation. Being in the treatment group was considered a risk as well. This is likely due to treatment increasing the intensity of PO supervision and thereby probability for detection of wrongdoing. Failed drug tests improved revocation and multiple arrests were less associated with revocation than one arrest, potentially due to arrests being for minor infractions.

Table 12:Supervision-related Characteristics by Revocation Outcomes of Offenders Released in the CPI study

Explanatory Factors related to Supervision	Overall N=707	Revoked N=186	Not Revoked N=521
Sentenced to Probation or Parole***			
Probation	409 (57.8%)	84 (20.5%)	325 (79.5%)
Parole	298 (42.2%)	102 (34.2%)	196 (65.8%)
Time Sentenced to Probation or Parole**			
0-2 years	150 (21.2%)	54 (36.0%)	96 (64.0%)
2-4 years	325 (45.9%)	76 (23.4%)	249 (76.6%)
4+ years	232 (32.8%)	56 (24.1%)	176 (75.9%)
Number of PO Contacts**			
0 – 5	210 (29.7%)	61 (29.1%)	149 (70.9%)
6 – 15	260 (36.8%)	77 (29.6%)	183 (70.4%)
16 – 68	237 (33.5%)	48 (20.3%)	189 (79.7%)
Treatment vs Control***			
Treatment	330 (46.7%)	126 (26.3%)	251 (73.7%)
Control	377 (53.3%)	60 (18.2%)	270 (81.8%)
Failed Drug Tests***			
0	426 (60.3%)	91 (21.4%)	335 (78.6%)
1+	281 (39.7%)	95 (33.8%)	186 (66.2%)
Arrested during CPI***			
0	268 (37.9%)	0 (0%)	268 (51.4%)
1	260 (36.8%)	115 (44.2%)	145 (27.8%)
2+	179 (25.3%)	71 (36.5%)	108 (20.8%)

A multilevel analysis (using GLIMMIX in SAS version 9.4) was performed to examine the crude relationship between revocation and geographical factors. Therein, 707 released offenders (first level) were nested in 277 block groups (second level), which represented 55.7% of the 497 block groups in the Orleans Parish. The Grand mean was estimated at 0.33 with a 95% confidence interval of 0.28-0.39(p value: .0001). The ICC was derived from the following equation:

$$\textbf{ICC} = \textbf{V}_{BLOCKGROUP} / \textbf{V}_{BLOCKGROUP} + \textbf{V}_{INDIVIDUAL}$$

$$\textbf{ICC} = 0.63/ (0.63+ 3.29^{Snijders\ standard})$$

$$ICC = 15.9\%$$

This indicates that approximately 16% of the variability in the revocations is accounted for by the block groups in the study, leaving 84% of the variability to be accounted for by the offenders or other factors yet unknown. According to Merlo, in the case of binary outcomes, the ICC can be inaccurate suggesting the Median Odds Ratio is preferred to determine unexplained heterogeneity between the individual level variables related to individual and block group variance. The corresponding MOR for the empty model was 2.13. (Merlo, et al, 2006, Snijders and Boskers, 1999).

The crude multilevel associations depicted in Table 13 confirm a significant relationship between Urban Insecurity and the sub-indices of Urban Insecurity on individuals in block groups regarding revocation, with the exclusion of Female Hardship. Both the continuous indices and categorical version were presented, in order to examine the impact of the extremes. Additionally, a correlation coefficient was determined to measure of degree by

which the percent revoked was related to Urban Insecurity. A positive correlation was produced at .738 (range from -1 to +1), supporting a strong correlation between increases in Urban Insecurity and increases in revocation.

The crude ICC demonstrated a significant amount of total variance due that was due to the block group level factors in relation. Table 13 shows significant association regarding revocations and measures of insecurity with an ICC of 15.5% and an overall 3% increase in revocation per unit increase in Urban Insecurity. The pattern of this positive association was sustained at the highest-level exposure to insecurity resulting, increasing the likelihood of revocation by nearly 60% compared to those with the lowest level (Odds Ratio=1.58, CI: 1.02-2.48). A similar positive association was observed for Structural Inequality, Concentrated Deprivation and Crime and Alcohol, yielding a respective ICC of 15.7%, 15.7% and 15.4%. While a significant association was not seen in the distinction between low and medium levels of the indices, the differences between low and high were stark. All five indices were significant at the high level representing increases in revocation in Urban Insecurity, Structural Inequality, Concentrated Deprivation, Crime and Alcohol and Female Hardship from a 59% to 71% increase in risk of revocation, (reference: low exposure areas). The reverse scenario occurred however with regard to areas of Female Hardship (a sub-index characterized by a pronounced concentration of female-headed households, children under 18 and children that attend public school). This factor significantly decreased the likelihood of revocation for those in the highest versus lowest level of exposure.

There was a decrease increase in the ICC from the empty model to a crude model with Urban Insecurity, Structural Inequality and Concentrated Deprivation, which infers a tighter explanation of variance.

Table 13:
Empty Model and Crude Odds Ratio Associations of Revocation to Urban Insecurity

Revocation Individuals = 707 Block groups = 277	Empty Model with Odds Ratio Estimate	Urban Insecurity	Factor 1 Structural Inequality	Factor 2 Concentrated Deprivation	Factor 3 Crime and Alcohol	Factor 4 Female Hardship
Intercept(SE) -1.11(.09) P value .0000	0.3 (0.28-0.39)***		Crude Odds Ratio (95% CI)			
Overall Model		1.03 (0.28-0.39)*	1.08 (1.01-1.15) *	1.07 (1.01-1.14)*	1.06 (1.01-1.11)*	0.92 (0.83-1.01)
Crude Model :moderate		1.34 (0.28-0.39)	1.13 (0.71-1.78)	1.50 (0.97-2.32)	1.56 (1.00-2.46)	0.89 (0.59-1.36)
Crude Model :high		1.59 (1.02-2.48)*	1.71 (1.11-2.63)**	1.65 (0.89-2.18)	1.52 (.99--2.35)*	0.64 (0.41-0.99)*
Estimate(SE)	.63(.15)	.60(.15)	.61(.15)	.61(.15)	.60(.15)	.60(.15)
ICC	16.2%	15.5%	15.7%	15.7%	15.4%	15.5%
MOR	2.13	2.09	2.10	2.10	2.09	2.09

p-value: ***p=0.001; **p=0.01; *p=0.05

Table 14: The Effect of Urban Insecurity on Individuals Released from Probation and Parole: Adjusted Multilevel Models

Revocation Individuals = 707 Block groups = 277	Empty Model	Model 1. Urban Insecurity	Model 2. Structural Inequality	Model 3. Concentrated Deprivation	Model 4. Crime and Alcohol	Model 5: Female Hardship
Intercept	0.33*** (0.28-0.39)		*Adjusted Odds Ratio (95% CI)*			
Treatment vs. Control		2.77 (1.76-4.35)*	0.38 (.19-0.76)***	3.04 (1.91-4.83)***	2.65 (1.68-4.17)***	2.76 (1.68-4.54)***
PO Contacts		0.95 (0.93-0.97)*	1.2 (0.74-1.95)***	0.95 (0.93-0.97)***	0.95 (0.93-0.97)***	0.95 (0.93-0.97)***
Recidivism Risk		1.28 (1.00-1.65)*	1.62 (1.01-2.59)*	1.27 (0.99-1.64)*	1.28 (1.00-1.65)*	1.34 (1.04-1.71)*
Employment Length		0.58 (0.45-0.75)*	2.61 (1.65-4.14)*	0.58 (0.45-0.74)**	0.57 (0.45-0.74)***	0.28 (0.16-0.47)***
Failed Drug Test		2.25 (1.45-3.49)*	0.95 (.93-0.97)***	2.22 (1.43-3.46)**	2.31 (1.49-3.60)***	2.26 (1.44-3.55)***
Probation vs. Parole		1.49 (1.01-2.2)*	1.29 (1.00-1.66)**	1.49 (1.01-2.19)*	1.48 (1.00-2.18)***	2.76 (1.68-4.54)***
Continuous Indices		1.03 (1.00-1.06)*	1.08 (1.00-1.14)*	1.02(.095-1.09)	1.04 (0.99 -1.10)	0.98 (.88 -1.09)*
Categorical Indx		[ref]	[ref]	[ref]	[ref]	[ref]
Medium		.84 (0.56-1.27)	1.2 (0.74-1.95)	1.68 (1.04-2.69)*	1.27 (0.79-2.04)	1.02 (0.64-1.63)
High		1.52 (0.98-2.38)*	1.62 (1.01-2.59)*	1.19 (0.74-1.91)	1.41 (0.89-2.23)	0.92 (0.55-1.55)
Estimate(SE)		.41(.42)	0.43(.62)	0.44(.61)	.42(.17)	0.56(.18)
ICC	0.01	11.15%	11.52%	11.72%	11.39%	14.6%
MOR	1.02	1.84	1.86	1.87	1.85	2.04

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The analysis presented in Table 14, tests Urban Insecurity and its sub-indices in an adjusted model, controlling for individual level factors most known to impact recidivism. In the multilevel model, the Urban Insecurity Index and two sub-indies (Structural Inequality and Female Hardship) continued to exert a significant impact on revocation both as continuous and categorical measures.

As with the crude model, the direction and magnitude of the indices in the adjusted model were similar. Urban Insecurity and Structural Inequality were significantly associated with increases in revocation, and Female Hardship was observed to have a significant inverse relationship with revocation. The measure of ICC and MOR were slightly decreased when compared to the crude model, suggesting the important role that these factors may play in explaining the block group level variance in revocation. For example, Urban Insecurity and Structural Inequality in the Crude model had a significant positive impact, increasing the likelihood of revocation (Odds Ratio: 1.03 (1.00-1.06), and 1.08 (1.00-1.14) respectively, (p value = .05). There was a further reduction in the ICC from 15% to 11% when testing the adjusted model. As a stronger estimator of differences between the individual level variables related to individual and block group variance, the MOR infers moderately strong effects of Urban Insecurity, Structural Inequality, Concentrated Deprivation, Crime and Alcohol and Female Hardship, (MOR, 1.84, 1.86., 1.87, 1.85, 2.04).

In Figure 8, the 10 bins represent the 10 increments of each area by its level of Urban Insecurity, whereas the bins (index_1, index_2 and index_3) refer to areas of very low and low insecurity and the bins (index_8, index_9, index_10) refer to those areas with moderate to high Urban Insecurity. The revocation means is defined as the proportion offenders released in low to high insecurity and their revocation average. As will be discussed in the following Paper 3 regarding mediation and moderation, increased revocations in areas of low insecurity might occur for different reasons than in high insecurity, most.

Figure 16:
Recidivism means per 10 equal 'bins' of Urban Insecurity

Distribution of Revocation Means across the Urban Insecurity Index

0.33	0.30	0.36	0.17	0.22	0.31	0.26	0.21	0.23	0.24
index_1	index_2	index_3	index_4	index_5	index_6	index_7	index_8	index_9	index_10
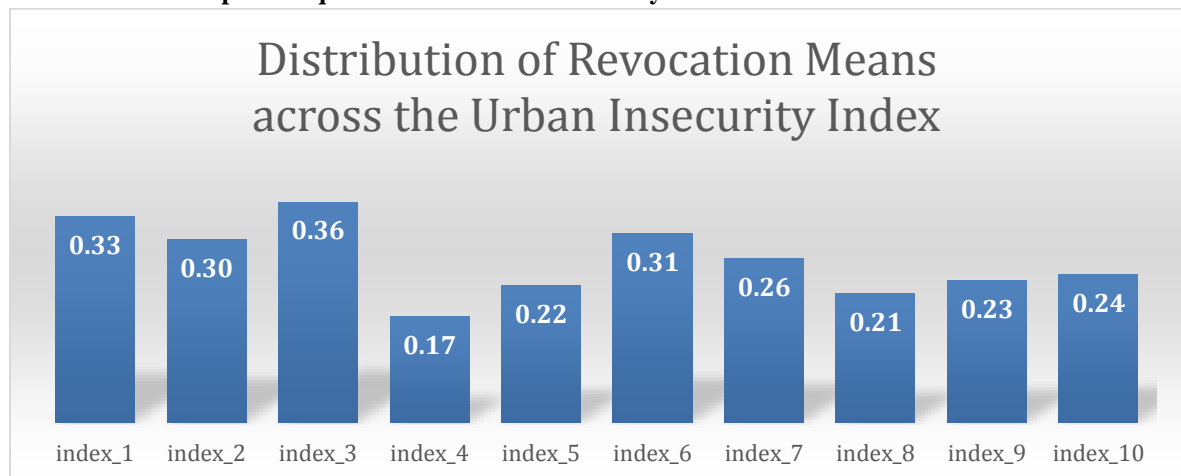
3.4   Discussion

Overall Findings

The objective of this study was to understand the relationship between the construct of Urban Insecurity, its constituent indices, and the reentry outcomes for released offenders, specifically for revocation or return to prison. In order to achieve this, a multilevel analysis was performed 'placing' offenders in micro-environments of release (i.e. the first address

they release to from jail). These individuals, nested in block groups, were assessed for both exposures to Urban Insecurity and reentry outcomes. A measure of variance was divided between individual and block group level variables, distinguishing the proportions of total variance due to either. Findings indicate an important role of Urban Insecurity and its components in the likelihood of revocation with an ICC of approximately 15% the Urban Insecurity Index and for each of the indices, with an average MOR of 1.85. At the highest levels of the Urban Insecurity Index and of each indices, there was a significant positive association with revocation, indicating that insecurity and its constituent drivers have an important role to play in the 'survival' or 'failure' of offenders as they are released from prison.

This study contributes to the literature by being the first ecological study to look specifically at measures of Urban Insecurity as a primary driver of revocation, in particular in the United States. This is in contrast with studies that focused primarily on individual risk factors, which have been discussed earlier. A small number of studies that look at the ecological characteristics of neighborhoods as a predictor for crime as it relates to the returned offender during revocation. Studies have significantly linked Social Disorder, Alcohol Outlet and parolee densities to revocation (Boggess & Hipp, 2014; Chamberlain, 2012; Hipp et al., 2010). Another ecological study found the lack of employment and of social services, as important factors to enhance homicide (Dickson et al., 2013). While each of these studies give strong arguments of a short list of ecological factors such as alcohol outlet, or the evidence of social cohesion, the Urban Insecurity Index addresses

multiple vulnerabilities, with the option of disaggregating into at least three indices with high internal reliability to test hypotheses against. Given the scope addressed in the Common Factor Analysis, there was a clear benefit to this study to retain as many common factors was were appropriate and not reduce those that tell a comprehensive story, as with Sampson Concentrated Disadvantage Index.

While Sampson is well known for connecting violence and crime with Concentrated Disadvantage and Social Disorganization, he has presenting some intriguing research pointing to race alone as an important predictor of violence, specifically among black people, particularly in the contexts of Chicago's highly segregated housing and in comparison to the nearby Latino populations (Sampson, Morenoff, & Raudenbush, 2005). As mentioned before, many offenders base their place of release less on safety and more often on cost, social support and convenience (Swartz, 2010) and that reestablishing a base in an affordable place also runs the risk of exposing released offenders to poorly resource areas with existing high crime(Pryor, 2010).

This study adds a number of benefits not yet seen in the current ecological studies regarding recidivism. Primarily, operating at the smallest level of aggregation, the block group level, provided a doorway to consider spatial autocorrelation, and determine areas via LISA mapping of high-to-low and low-to-high block groups. Also, the factor analysis yielded factors that have not been widely discussed in the literature, such as the strong loading of female heads of household with children under 18, in public school, for many scenarios

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actually exerted a protective effect. The large finding however is the strongest loading factor, accounting for nearly 50% of the variance of the Latent variable, is Structural Inequality, which in this and following studies will continue to prove its reliability and validity when tested in other contexts. Finally, there are a sparse few articles that combine the breadth of the factors included in the Urban Insecurity Index. In addition, the linkage of the sub-indices, determined by factor analysis, is likely the first of its kind to test the patterns of revocation. Structural inequality as a primary driver of Urban Insecurity. On a final note, the continued significant association of the Urban Insecurity Index in the crude and adjusted regression model indicate that these spatial mechanisms have an important relationship to revocation, supporting the primary hypothesis regarding the effect of insecurity on the ability of a vulnerable population to 'succeed' (i.e. successfully reenter society) after release.

For future studies of this sort, new spatial technologies should be employed, particular to deal with the limitations presented by population and exposure irregularities. One such mechanism was proposed in a recent dissertation titled: 'Mesh modeling for spatially adaptive density mapping of crime data. Now Dr Albert Ramon from the Department of Electrical Engineering and Computer Engineering had proposed in his dissertation a redesign the process of spatial analysis by reformulating spatially adaptive methods for scaling spatial data using kernel density estimation techniques with the Choropleth maps that uses color density to express 'heat' or important indicators or variables. See Figure 9 below; Content adaptive mesh modeling or CAMM, which has the specific capacity to

adapt the mesh to fit smaller (or larger) units to achieve the required accuracy for spatial

uniformity needed for predictive values.

Figure 17:
Using crime density adaptive mesh model, or CDAMM as an alternative to Multilevel models to smooth high and low sampling density
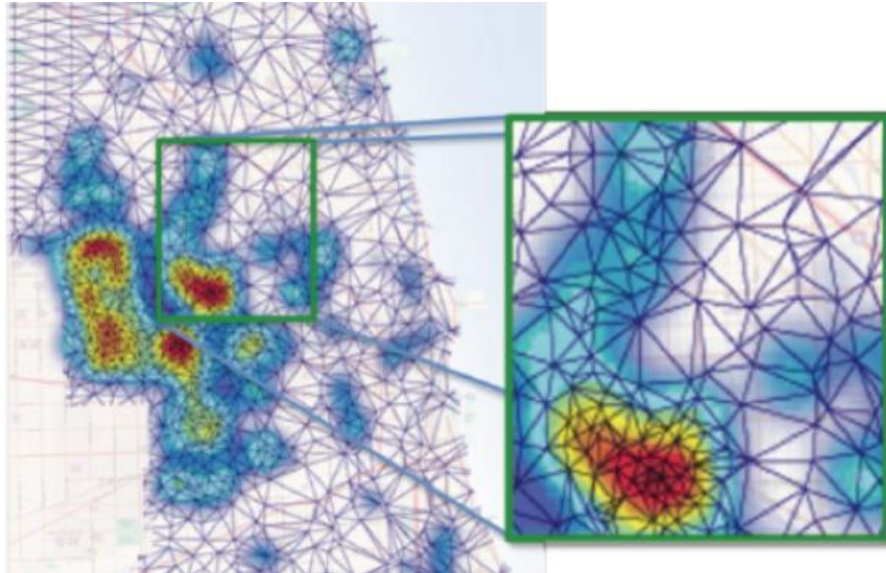
The benefit of using use a method for further studies will be in the ability to aggregate like

populations in clusters larger than block groups which would generate a better design when

population, exposure and outcome data are small within each unit.

3.4.1 Limitations

Revocation is the outcome variable of choice for reentry studies, however there are a

number of issues with the data point itself as it relates to this specific study. According to

the Deputy Director of Probation and Parole for Orleans Parish, revocation traditionally

refers to an outcome of a series of administrative processes which happen sometimes long

after the offender initial arrest or violation of Probation and Parole. The speed of processing regarding revocation might depend on the type of offense (i.e. multiple failed drug tests resulting in a technical revocation, or an attempted homicide resulting in immediate arrest). The offender may be arrested long before they are charged. Once they are charged there is another pause before they are determined 'revoked' in the universal LA DPS&C correctional faciilty database (CAJUN). Also time to revocation differs tremendously from Probationer and Parolees. Parolees can be revoked quite easily, with only a letter to the parole board as the primary adminsitrative mechanism, however Probationers must be formally charged, tried and found guilty to be revoked, which takes a considerable amount of time. In which case, revocation is a more reliable measure over time, specifically 3-year and 5-year revocation is a standard for measuring recidivism among release populations for these reasons.

The level of aggregation, specifically at the block group, has been documented to cause concerns regarding the strength of environmental markers in relation to individual level factors, while much has been written on aggregation bias and ecological fallacy (cite). Spatial autocorrelation had been implemented as a strategy of this analysis to guard against false inferences by determining significant high to low Urban Insecurity clusters. Luc Anselin, the creator of the spatial autocorellation software used for this analysis (GEODA©) refer to them as 'local pockets of nonstationarity, or hot spots' along with those outlier locations where a conflict in likeness occur. These 'hot spots' theoretically

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could have been used in a regression analysis to better determine areas of aggregation that are alike and can therefore be analyzed together (Addicott et al., 1346; Anselin, 1995)

Alternately, several dissertations cite the similar problem of developing useful predictive units for crime maps to concur with type and amount of data to be found within. The issue optimization of 'pixels' or levels of aggregation along with reliably testing the data are crucial. When units are too small, the data attributed to them are too scant to generate strong predictions. When pixels are too large, they lose the heterogeneity of the area, as seen with census neighborhoods. Specificity among aggregation levels was the deciding force in choosing the more granular 'block group approach' for this study. However, the total population exposed and the population with the outcome of interest may have been too small to generate results with strong reliability and predictive power (i.e. 707 individuals nested in 277 block groups within 182 having the outcome of interest, even with the retrospective power calculation).

There were a number of confounders effecting the study of revocation in relation to mapped Urban Insecurity. **Experimental design**: The study was designed by the Office of Probation and Parole and Louisiana Department of Corrections and Public Safety. There was a large potential for imbalances in risk, critical differences in exposure to Urban Insecurity and the generally decreased levels of criminal behavior in more exclusive neighbors. **Analysis:** There are several potential explanations for the lack of significant Multilevel Model outcomes relating to revocation the most obvious issues: Offenders do

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not often return to areas of concentrated abundance. While there was demonstrated variance across the multilevel model, there was less overall exposure of offender releases to very low insecurity houses. The can be described as a **selection bias**, as more distinguishing measures could have been taking, linking the index to the test area. Another issue was the focus of the CPI project on **crime 'hot spots'**, as opposed to a randomly selected areas across hot, cold and transition spots. The control group was chosen from zip codes with moderate crime. This design introduces confounding in the Multilevel Model excluding the possibility for a random sample. For this reason, Propensity Score Matching was employed to remove bias from individuals.

Timeliness is another important issue is related to the time until actual revocation. At the time CPI had closed its documented study of each client's reentry experience, offenders been released for an average of 8 months to one year. The one-year revocation rate of Louisiana is 19% (internal report). Accordingly, the overall revocation rate for this population was 22%. Within 3 years however, the expected revocation rate will be 45% and over 50% by 5 years. Therefore, the 3-year and 5-year revocation data will likely to demonstrate the true effect of Urban Insecurity's impact on revocation. A recapture of revocation at a 3-year mark may yield a more positive relationship.

3.4.2 Strengths and Future Directions

Secondly, the study is novel in using the Block group as a primary unit of analysis for structural inequality and other measures of poverty and vulnerability, which was distinctly

relevant in the case of New Orleans due to its long history of latticed poverty and abundance (Ried, 2003).

The first order for future research will be explored in the next paper regarding the interaction of urban insecurity with individual and treatment level factors to test for moderation. This might directly address the problem of dynamic interactions across outcomes. Secondly, considering an upward aggregation from Block groups to small clusters of like Block groups might yield a more significant relationship between insecurity and revocation. Finally, an updated data set regarding 3-year revocation rates is expected from the Department of Corrections. This extended time period might have the richness of data and variations across Block groups that would yield a more accurate representation of the impact of Urban insecurity on revocation.

CHAPTER 4: PAPER 3: 'BRINGING A KNIFE TO A GUN FIGHT': ARE CURRENT REENTRY PRACTICES ROBUST ENOUGH TO COMBAT RECIDIVISM IN INSECURE ENVIRONMENTS?

4.1 Introduction

Criminals are not generally thought of as a vulnerable group. As understood historically in Foucault's '*Discipline and Punish*', there has been a recent (~100 years) transition in how societies penalize criminals from open violent forums of mob violence to more humanitarian societies where 'bodies' relinquish their self-control in prisons to be watched and regulated (Foucault, 1975). In this way, punishment is a secret to the remainder of society, unavailable for our satisfaction or repulsion. This thinking is changing as a recent edition of Journal of Criminological Research, Policy and Practice titled '*Vulnerability and the criminal justice system*' relate to multiple levels of vulnerability experienced, not only from the crime victim and criminal justice practitioners, but including the crime perpetrator who must now contend with social exclusion though incarceration, the loss of autonomy, and effectively a forfeiture of citizenship without the ability to vote or support their family (Emerald, edition, 2015).

Books addressing the phenomena of the criminal as a second-class citizen, such as the '*New Jim Crow: Mass Incarceration in the Age of Colorblindness*' and '*American Apartheid: Segregation and the Making of the Underclass,*' necessarily take a blended scientific approach to unveil the complexity of the American criminal justice system, using multi-disciplined data, including: legal documents, population-based statistics, economic analyses, qualitative and mixed methods (Alexander, 2010, Massey, 1990).

Whereas the culpability for individual crime generally rests with the individual, when exploring chronically marginalized populations that also happen to be plagued by extraordinary crime and violence, a system approach is required and should include ecological studies, political ecology of place and socio-spatial dimensions of the built-environment over time (H. Grunwald et al., 2007; Shah, 1988). These approaches would point to important economic, political and societal changes that occur wherein other players (besides criminals) should be held accountable in the production of both vulnerability and disproportionate exposure to crime (Robert Muggah, 2012).

The Intended Application of the Urban Insecurity Index

In the extended case study of New Orleans that has been presented in this dissertation, systems thinking was required to develop an index that was sufficiently wide-ranging to demonstrate the density and magnitude of the many inequalities and disparities now explicit in the Urban Insecurity Index. As seen in Figure 15, micro-level to macro-level data were considered in order to treat all three proposed integral components to insecurity, Structural Inequality, Concentrated Disadvantage and Social Disorder and Disorganization (Morenoff et al., 2001; Muggah, 2012; Peres et al., 2012; Ribetti, 2002).

Figure 48:
Extension of Bronfenbrenner's Ecological Systems using Criminological Theories
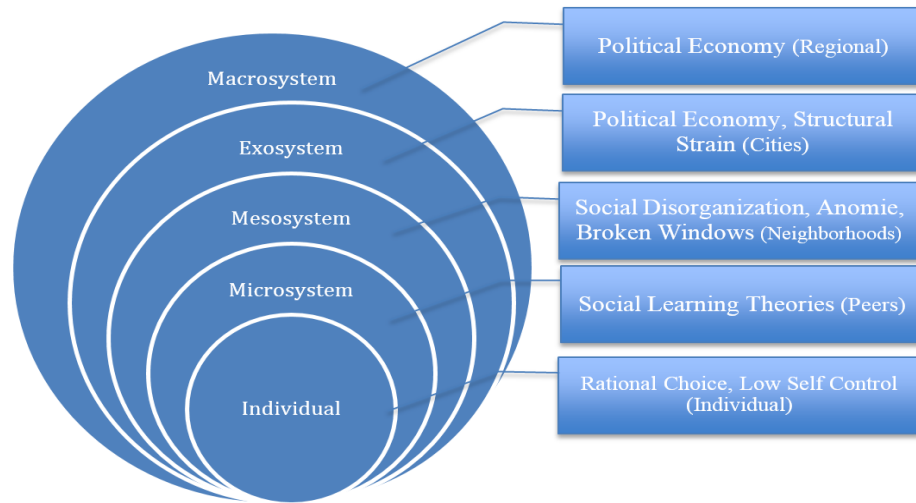
(Bronfenbrenner, 1994)

The Urban Insecurity Index takes into account measures of the health of the regional economy regarding unemployment and the engagement of low wage/low skill to high wage/high skill jobs. The ability of the city to provide both national-standard education and living-wage work for its citizens was estimated, as well as the need of those living below the poverty line or in need of social service benefits. Use of public or private transportation helped determine mobility and asset ownership, an important theme also assessed by home ownership and home value. Known as a murder capital, felony and misdemeanor crimes where tracked alongside alcohol outlets. Prison expenditures per block group were enumerated, as were disrupted families, or 'female-headed' households. Based on a hypothesis of concentrated abundance occurring proximal to concentrated poverty, a granular approach was taken, using the aggregation level of the block group, the

lowest census unit of measurement. The final measure, through Common Factor analysis proposed four factors constructing the latent variable of Urban Insecurity.

Figure 19:
Proposed Construct of the
Latent variable of Urban Insecurity

Figure 20:
The block group level spatial representation of Urban Insecurity by Insecurity level Across Orleans Parish
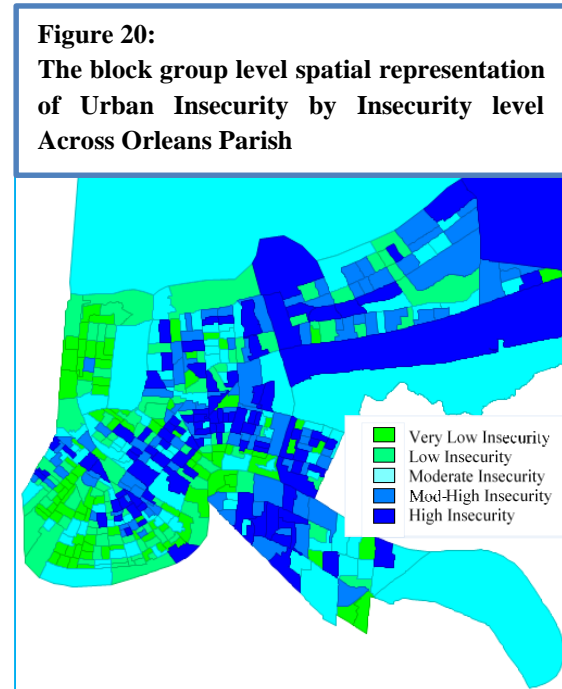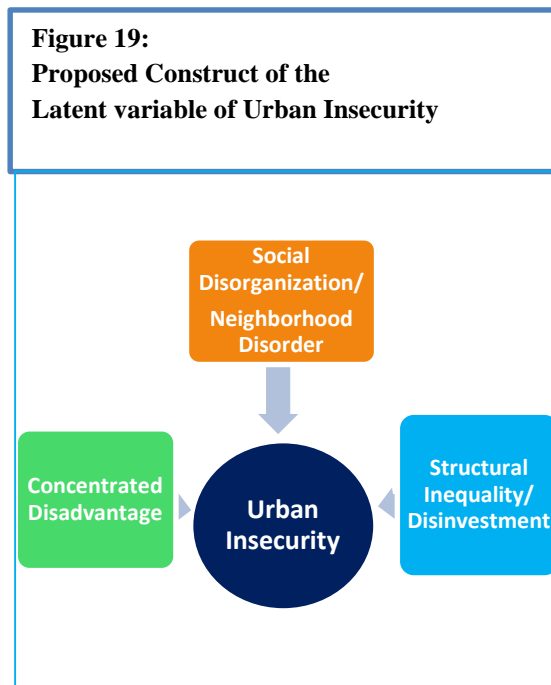
The salient theme of this research is to determine the systemic factors driving insecurity, noting the relationship between structural inequity, concentrated poverty and deprivation which are known to accelerate crime and violence (Massey, 1990; Robert Muggah, 2012; Parker, 2000; Sampson et al., 2005; Townsend, 1979) and testing whether the microenvironments where insecurity concentrates has a significant impact on a vulnerable population.

The exposure to Urban Insecurity is presumed to have an effect on the released offender by the first day of release up to the last day of supervision or freedom from incarceration. The evidence on reentry shows that 62% are released to the first residence of release being the family home or homes of immediate family. Even up to 8 months after release, offenders are found to be predominantly residing in the household of their family. Because the average age of the study popuulation is 25 years old, we feel justified in assuming they are residing in the household of their youth. This home then would represent the most likely source of their exposure to Urban Insecurity even before release.

The offender must therefore navigate their own personal historical risk, which may include the propensity for crime evidenced by their criminal history, and intensified by high risk behaviors such as substance abuse or associating with known felons, (otherwise known as family and long-term friends) (Berg et al., 2009; Hipp et al., 2010; Sampson et al., 2005). The primary effort of Probation and Parole is 1) to detect the reengagement of crime and 2) to support the offender with referrals to mechanisms of assistance (social services, drug rehabilation , job readiness) and to assist the offender in finding work. In this way, supervision is intended to preempt the ecological 'destiny' of an insecure area (Dean et al., 1996; Miller et al., 2015)

The goal of this research is to determine the moderating impact of Urban Insecurity on revocation specific to four protective and threatening influences to the released offender's reentry outcome. Urban Insecurity refers to the (in)ability to sustain a means of living, i.e.

accessing food, shelter, employment and individual and community safety. The Urban Insecurity index is therefore a composite measure of factors encompassing drivers for insecurity. At its extreme, areas of Urban Insecurity were identified with high reliability to be suffering with structural inequality characterized by undereducated, underemployed populations with low income, pronounced family disruption and exposure to severe crimes, alcohol outlets and blight. This effect of Urban Insecurity is theorized to adversely interfere with the process of reentry through implict and explicit mechanisms. (Muggah, 2014). The hypothesis is that the effect of each variable will be moderated by Urban Insecurity and will assert synergistic effects on revocation at low levels of insecurity and antagonistic effect on revocation at higher levels of insecurity. As more sophisticated discussions on the requisite conditions of insecure microenvironments surface (see Paper 1 and Paper 2), there is an expectation that this inquiry will become a high priority area for urban planning,

As Paper 2 investigating the spatial imprt of Urban Insecurity, the purpose of this study to the further explore the Urban Insecurity Index for its interaction with independent variables demonstrated to have a significant association with revocation among released offenders.

4.2.1 Literature Review

A Rational Actors' Pathway towards Crime and Violence

As individual risks will be discussed below, community risks are equally important for elucidating the mechanisms driving revocation of released offenders. Current theories

include: General Strain Theory describes when perceptions and experiences of the success generated in prison do not align and the offender's ability to provide for themselves and their dependents (Agnew, 1992) This may be cause emotions of anger and frustration also known as 'Anomie' when success or perceived success is not gained. Spatial Contagion (Stahler et al., 2013) General Routine Theory (Agnew, 1992; Baron et al, 2002), Proximal Criminal Social Networks (Webster et al., 2006) are similar in that they highlight proximity and engagement of the social processes of reformulating social controls, social capital and self-help. Theories regarding Trigger Risk Points take into account how spatial saturation points can affect crime, meaning as a critical number of offenders take residence in a neighborhood, this can actually transform the basis of social control in that neighborhood (Stahler et al., 2013) (Clear et al., 2003). Therefore, Trigger Risk Factors, as situational conditions, can exacerbate the likelihood of violence occurring, and can be used to observe the transformation of high crime neighborhoods to high violence neighborhoods (Moser et al, 2006). These emerging theories further the elucidation of processes where affecting social cohesion, efficacy and social control may shift towards a stance of violence as 'acceptable' (Boggess et al, 2014; Chamberlain et al., 2015)

It has been found that when the returnee's numbers were low, the neighborhood's social cohesion and collective efficacy are generally able to positively influence the criminogenic risks or needs of the offender, creating an expectation of adhering to neighborhood values. However when a tipping point is reached, regarding the number of offenders in released in an area. The neighborhood becomes overwhelmed by 'a society' of released offenders

(Boggess et al., 2014). Clear and Rose, who are known for renaming incarceration as 'Coercive Mobility', assert that when the neighborhood takes on too many dislocated offenders, (often because it is affordable), the protective effects of strong local social networks weaken (Clear et al., 2003).

Offenders as a Highly Vulnerable Group

This study will highlight those criminals who have been detected and punished for crimes by criminal justice departments. This choice is for several reasons. Most crime generated in insecure environments are neither reported nor punished. However, those offenders who have entered into the criminal justice system generate many types of data from criminogenic risk and needs assessment to consistent records of residents and employment. Also, as offenders encounter difficulties in these areas, such as employment or drug abstinence, documentation is produced and several types of vulnerabilities can be assessed.

In addition, there are certain liabilities only offenders who have entered the criminal justice system, or post-conflict/post-disaster populations will have encountered. One primary issue is 'the rapid de-capitalization' an offender experiences when jailed, including but not exclusive to a tremendous loss of financial capital due to court and jail fees and forfeitures, bail payment/repayment, restitution and missed child support. Another common issue among offenders is the impact of forced migration from the household resulting in a loss of resources that household would receive (Pryor, 2010, Cobinna, 2010, Mitchell, et al.,

2012). Offenders express the financial burden of interacting with the justice system as a primary source of vulnerability (Phelps, 2013).

Criminal offenders are also subject to several types of vulnerability upon release from incarceration. These can be thought of in terms of immediate, intermediate and chronic needs (Claggion, 2008).

Days upon release, the main offender concerns include: homelessness, hunger and transiency, the immediate need for financial stability through employment or aid, and addressing physical health issues, particluarly if the offenders health care was being managed long-term in prison. The second tier of threats may occur within weeks of release and include: gaps in sufficient levels of support from family or friends, (i.e. social capital), the threat of being unable to garner employment due to low educational status, having a criminal record or insufficient opportunities for low-skilled labor, an increased susceptibility for re-engagment in crime industries to 'survive' (i.e. leaveraging social capital with criminal acquaintances, and untreated mental health disorders, which is an substantial driver of incarceration (Gutierrez et al., 2013; Kubrin et al., 2006; Phelps, 2013; Steinmetz et al., 2015; Swartz, 2010, James, 2003, Solomon, 2015).

There appears to be an exercise of 'survival' that occurs when releasing into an insecure area as the same systemic inequity and structural strain that initiated crime cultures are exactly those that greet offenders as they attempt to reintegrate into society (Addicott et

al., 2015; Kirk, 2009; Ostermann, 2015; Wilkinson, 2001) (Agnew, 1992; Baron et al., 2002; Kubrin et al., 2006; Lamb, 2010). An example of this is 'self-selecting' residential areas that are affordable, **but** also experiencing concentrated deprivation and pronounced crime and violence. The offender subsequently feel the need to have access to a gun for self-preservation, but may be revoked for having the gun at all (Claggion, 2008; Wilson, 2011). Another survival issue refers to the lack of legitimate opportunities for monetary success and actual (legal) societal attainment for this population. The opportunity with the lowest cost of entrance, requiring little skill and generally locally available to engage is generally drug dealing, and may often be a 'second job' as offenders have legitimate but insufficient work (George, 1998, Keyes, 2002, Kitwana, 2002).

Traditional Reentry: Surviving Probation and Parole

Traditional indicators for recidivism are individually-focused and do not consistently take into account ecological vulnerabilities that may directly affect the offender's ability to reengage the community in a meaningful and effective way. Most recidivism risks are drawn from the criminal history, but adherence to the conditions of supervision by Probation or Parole will decrease the assessed risk scores. The problem is that the process of supervision itself is fraught with peril and remaining free in the context of Probation and Parole supervision conditions can be more challenging than commonly perceived (Miller et al., 2015; Phelps, 2013; Steinmetz et al., 2015). There is a persistent and documented difficulty regarding the meeting all requisite conditions of Probation and Parole, particularly with little education, training, income or savings(Phelps, 2013; Stern, 2010).

These conditions include:

- reporting when moving residence,
- off-site work-hour visits with Probation officers
- restitution payments,
- maintaining employment,
- mandatory abstinence of drug use and sometime alcohol use,
- compliance with child support obligations,
- no association with felons,
- total avoidance of weapons and illegal substances including recreational marijuana

Traditional Reentry: Recidivism

The risk of being revoked within a year of release, in Orleans Parish is historically 18% and increases to 32 - 35% within 3 years. Recidivism for small or petty crimes is common, far less common for violent crimes. The following issues have been found to significantly increase or decrease return to prison. (James, et al, 2015, Miller, 2015, Phelps, 2013, Steinmetz, 2015)

- Employment and Debt
- Length of Probation and Parole Supervision sentence
- Intensity of Criminal History
- Family involvement, specifically if married or married with children
- Substance Use or Abuse
- Responsively to rehabilitative programming encountered in or outside of jail
- Evidence-based prison programming inside or outside of jail
- Physical and Mental Health

In Lousisana, the LA DPS&C have a both an in-depth knowledge of these threats to recidivism and the political will to address them, but not the consistent funding from the state or federal bodies to sustain efforts. In 2016, nearly half of all Lousiana reentry

programs were cut due to massive statewide budget cuts. These programs are divided into pre- and post release strategies and provided the following resources:

4.3 Methods and Measures

4.3.1 Study Design and Population

The design proposed for this study is a secondary longitudinal cohort design using selected individual, treatment and outcome indicators extracted from a pilot study of Reentry program for adult offenders. The study was funded by the Bureau of Justice Assistance FY2012 Second Chance Act Statewide Recidivism Reduction and Violent Crime Prevention Initiative (CPI) and performed from April 2012 to July 2014 in New Orleans and Baton Rouge, Louisiana. Participants were selected by LA DPS&C using the following eligibility criteria: Individuals being an released into supervision who were under age 30 and who **a)** self-reported or was identified as having involvement in a security threat group (gang, crime family), **b)** had three or more arrests for an offense involving a firearm or crime of violence; or **c)** had three or more felony arrests involving the distribution of drugs. Participants received differential supervision based on the location of release, with the most intense or 'enhanced' treatment focused in the zip codes identified to have the most crime. By the conclusion of the pilot, 1245 released offenders were enrolled and received standard or enhanced supervision between Orleans Parish and the City of Baton Rouge.

4.2.2 Study Measures

Outcome Measures

Revocation is the definitive outcome variable regarding reentry studies and the outcome of interst for this study. Revocation can occur for a number of reasons, including new crimes, pending crimes (which are completely separate crimes than those affiliated with probation or parole supervision and have not yet tried in court) and technical revocation stemming from a failure to comply with the conditions of Probation and Parole. Prevention of revocation is key to the conversation on the reduction of incarceration and the opportunity for prevention or intervention at the point of reentry represents a large cost savings.

Moderating Variables

The Urban Insecurity Index is a comprehensive ecological measure denoting an inabilty to sustain a livelihood due to profound lack of important institutional, infrastructural and local resources needed to secure basic needs and pronounced disorder. In a recent study on Urban Insecurity, the City of New Orleans was used as a case study to develop an Index of Urban Insecurity (Singh, 2016). The Urban Insecurity Index produced a spatial depiction of the drivers of Urban Insecurity which were hypothesized to be: Structural Inequality, Concentrated Disadvantage (as defined by Robert Sampson's work of the Chicago School) and Social Disorder (as defined by crime and alcohol outlet statistics) (Morenoff et al., 2001; Sampson et al., 2002). The distinction in this work from other vulnerability indexes, such as Social Vulnerability Index (Cutter) or the Standardized Neighborhood Deprivation Index (Messer) was a preferential focus on Structural Inequality and to some extent Structural Racism, playing close attention to areas where the concentration of minorities systemically precluded access to the means of survival and success. Additionally, a highly

granular approach was used in the spatial analyses in order to capture the micro-environments, using the smallest geographic level of aggregation, being the Block group.

The Urban Insecurity Index was mapped for the entirety of Orleans Parish at the block group level to determine micro-environments of (in)security. Using a multi-level, or hiearchical model, this study nests individuals (released offenders) within block groups at various levels of Urban Insecurity in order to assess the impact of exposure to reentry outcomes. The study tracks offenders through their residence upon initial release from prison or jail. Offenders are assumed to have been exposed to different levels of insecurity upon release, with an implicit understanding that they have been exposed to insecurity at different levels and during different phases of their life course. The assumption, in this case, is that the insecurity encountered during release has the most important effect on. block group level variables have been evaluated for their contribution to Urban Insecurity.

Figure 21
The Proposed Role of Urban Insecurity as a Moderator for Revocation and to various Independent Variables significantly associated with Revocation

Exposure Variables

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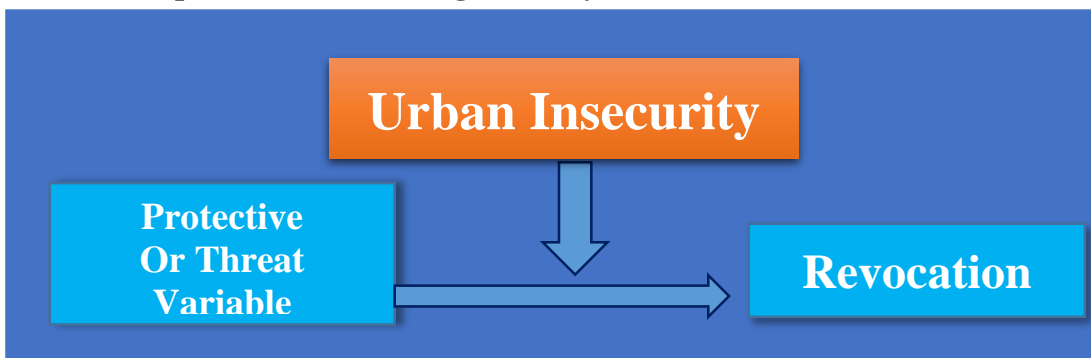
Threats and Protections to Recidivism

Though the literature provided a range of predictors to revocation of released offender populations, following variables chosen to be tested in this study were established as primary predictors of revocation for the CPI treatment and control group (described in detail in section 4.3.1 Study Design and Population). These variable produced consistent and reliable predictions about revocation patterns, and were tested at various levels with repeated results. These are: **1)** Recidivism Risk, **2)** Drug Use, **3)** Employment and **4)** Probation and Parole contacts. Given the results of Paper 2, regarding the significant contribution of the Urban Insecurity Index on revocation, Urban Insecurity is expected to moderate their effect on revocation—either synergistically or antagonistically. The nature of the relationship of Urban Insecurity on the independent variables and revocation is illustrated in Figure 22.

Figure 22: Systems Diagram Representation of Threats and Protector to Revocation
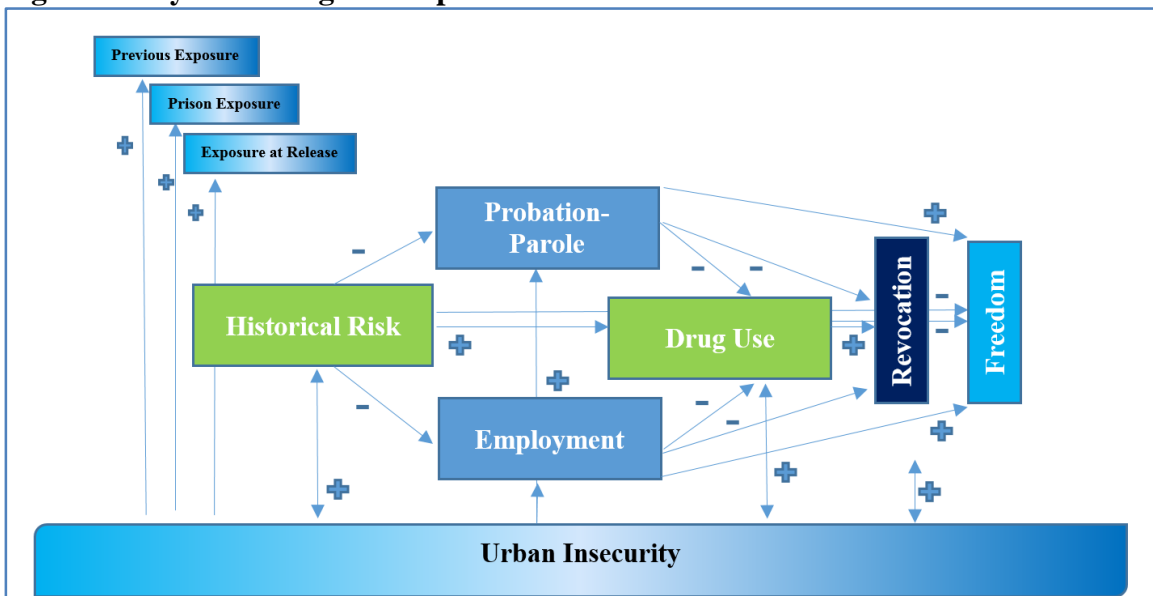
 Protections:

Employment Consistency

Employment, a strong predictor of decreased revocation, was gathered longitudinally over the course of a 14-month data CPI collection period for all released offenders and was documented on a monthly basis for employment at the following levels: unemployed, employed: under 20 hours, 20-39 hours and 40 hours or more. Employment data was gathered for both treatment and control cohorts, though due to increased contact, CPI treatement employment data is more accurate reflecting immediate changes. Employment data was available from the beginning of offender's release to either the date the offender became inactive (due to revocation, end of supervision, or short term incarceration) in the system or the date the CPI study ended. If the offender was incarcerated for a short term, the interuption in employment was mirrored in the employement data. For the reason of non-continuous employment (i.e. with several breaks for arrests, unemployment, etc), employment consistency was captured a ratio with a numerator consisting of sum of the months the offender worked and the denominator was derived from all months for which the offender was released.

Employment Consistency = Months did Work/Months Could Work

PO contacts

Another variable exerting a protective effect on revocation was PO contacts. PO contacts was recorded as a continuous variable and as the primary treatment variable for the CPI study. The goal of the CPI reentry program was to demonstrate if improving the quantity and quality of Probation and Parole Supervision would successfully decrease revocation. The study documented nearly 3 times the contacts made between the Probation and Parole

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officer and the released offender and the treatment group (an average of 6 contacts [Control] vs average 19 contacts [Treatment]. An improvement in quality was part of the experimental design regarding the training CPI officers received regarding motivational interviewing used to conjoin offender motivations with the supervision efforts. Improved quantity of supervision refers to an enhanced scheduling of visits up to three times the normal amount of standard supervision (three visists a month as opposed to one visit every three months). In order to determine that the population taken as a whole are similar, a Propensity Score Match was performed on various criminal history and demographic variables with excellent results.

Threats:

Criminal History

Criminal History is a common predictor of revocation, and refers to the general tendency for future offenses to reflect past offenses (Hipp et al., 2010). Elibility for the CPI program was based on a pre-set range of historical criminal activities reached by consensus of LA DPS&C, the Orleans Parish Probation and Parole Office and the New Orleans Police Department. The resulting criminal history profile is assumed to have the highest predictive value for revocation, and revoation for violent crimes. Offenders chosen for the CPI program therefore had documented **1)** any crime committed under the age of 17 establishing an early-onset of criminal activity. **2)** Gang membership, whether documented by self-identification or identified by law personnel. **3)** Crimes related to drugs, guns or violence. These histories were not comprehensive of each offender's complete criminal

history but included only crimes that ended in incarceration. A categorical variable was created combining those of the lowest, median and highest aggregate sum of each type of historical risk . Cut points were used to determine which historical behaviors predicted low, moderate and high Recidivism Risk, based from numerous corrections personnel were surveyed to determine the cut-points.

Drug Use (add data)

Finally Drug Use is a well established trigger for return to incarceration (Baron & Hartnagel, 2002; Sevigny et al., 2013; Zhu et al., 2006). The criminal justice system treats drug use as a crime and an indicator of the other illegal activities are being performed, such as drug sales and associated risks. Drug tests are given frequently by P&P officers in order to detect use and the type of drug used. Due to the high frequency of testing in the CPI study group, there is an higher than normal average mean of drug test.

Excluded Explanatory Variables

Individual level factors were excluded from this study, for the sake of simplicity. The variables are traditionally included in all regression models and are traditionally included to control for traditional contributing factors to revocation, specifically demographic variables such as race, gender and age. Typically, age refers to the age at the beginning of the current Probation and Parole sentence. Educational attainment is recorded as the last grade completed. The type of supervision (Probation or Parole) is important regarding the

ease at which a recovation can occur, and supervision length is measured derived from the original sentence time

4.2.3 Statistical Analysis

Moderation regression analysis was performed using the PROCESS© macros developed by Andrew Hayes for moderation and mediation analysis and run in SPSS version 24. Moderation was run using four separate models (see Figure 20 below), one for each exposure variable found to have a significant positive or negative association with the outcome of interest, revocation.

Figure 23:
Proposed Moderation regression models, including interaction term of Urban Insecurity combined with protective factors and threats to revocation

<div style="border:1px solid black; padding:1em;">

PO Contacts:

$$Revocation_i = \beta_0 + \beta_1 POcontacts_i + \beta_2 Urban\ Insecurity_i + \beta_3 Urban\ Insecurity_i * POcontacts_i + e_j$$

Work Consistency

$$Revocation_i = \beta_0 + \beta_1 work + \beta_2 Urban\ Insecurity_i + \beta_3 Urban\ Insecurity_i * work_i + e_j$$

Criminal History

$$Revocation_i = \beta_0 + \beta_1 CrimRisk_i + \beta_2 Urban\ Insecurity_i + \beta_3 Urban\ Insecurity_i * CrimRisk_i + e_j$$

Drug Use

$$Revocation_i = \beta_0 + \beta_1 drugtest_i + \beta_2 Urban\ Insecurity_i + \beta_3 Urban\ Insecurity_i * drugtest_i + e_j$$

</div>

All variables were centered on the mean value was analyzed for significant moderation of the interaction term. Conditional effects of the exposure variable were generated on the high, medium or low values (-1, 0, 1) of the moderater, but also using by using the Johson-Neyman technique were determined as partialed conditional effects for between 23 -25 equal 'bins' with significance values.

4.3 Results

4.3.2 Descriptive and Bivariate Analysis

A univariate and bivariate descriptive table is provided for the study population in detail Table 8. The treatment and control population in the CPI study were released across 277 block groups of a total 497 possible. There was a 35.7% revocation rate across both groups with 18.2% revocation in the control group and 33.4% revocation among the treatment group. Those released were predominantly Black (96.8%) and male (88.9%), also representing a disproportionate proportion of revocations of all demographic groups, with 26.7% Black males revoked as compared to 13.1% white males. Age and education were not significantly associated with revocation however, the intensity of criminal contacts from before the age of 17 and the number of historical drug, gun and violent crimes increased the likelihood of revocation. On the other hand, employment has a protective effect on revocation. Below, the two of the variables used in moderation analysis are shown regarding their relationship to revocation (Employment consistency and Recidivism Risk). There is a clear linear relationship (p value .001 to .000) between revocation and these predictor values.

Table 14.
Individual Characteristics by Revocation Outcomes of Offenders Released in the CPI study

Explanatory Variables related to Individual Risk	Overall N=707	Revoked N=186	Not Revoked N=521
Race*			
Black	684 (96.8%)	183 (26.7%)	501 (73.3%)
White and Non-Black	23 (3.2%)	3 (13.1%)	20 (86.9%)
Sex*			
Male	629 (88.9%)	179 (28.5%)	450 (71.5%)
Female	79 (11.1%)	7 (9.0%)	71 (91.0%)
Age			
15-20	123 (17.4%)	37 (30.1%)	86 (69.9%)
20-25	302 (42.7%)	88 (29.1%)	214 (70.8%)
25 and over	282 (39.9%)	61 (21.6%)	221 (78.5%)
Highest Grade Level Completed			
9th grade and below	192 (27.2%)	64 (33.3%)	128 (66.7%)
10th and 11th grade	292 (41.3%)	80 (27.4%)	212 (72.6%)
HS diploma/GED+	223 (31.5%)	42 (18.8%)	181 (81.2%)
Substance Abuse			
No substance use	332 (47.0%)	77 (23.2%)	255 (76.8%)
Substance use	375 (53.0%)	109 (29.1%)	266 (70.9%)
Employment* (% release months worked)**			
0 – 20%	229 (32.4%)	88 (38.4%)	141 (61.6%)
20% - 80%	226 (31.9%)	68 (30.1%)	158 (69.9%)
80 – 100%	252 (35.6%)	30 (11.9%)	222 (88.1%)
Recidivism Risk* (calculated fr Criminal History)**			
Low	210 (27.7%)	45 (21.4%)	165 (78.6%)
Med	279 (39.5%)	55 (19.7%)	224 (80.3%)
High	218 (30.8%)	86 (26.3%)	132 (60.7%)

As seen in Table 16, revocations among probation supervision were significantly lower than among parole supervision. Of those receiving probation supervision, revocations were significantly more likely to occur in those with shorter sentences (zero to two years). The highest levels of PO contacts were associated with a significant decrease in revocation. Being in the treatment group was considered a risk as well. This is likely due to treatment increasing the intensity of PO supervision and thereby probability for detection of

wrongdoing. Failed drug tests improved revocation and multiple arrests were less associated with revocation than one arrest, potentially due to arrests being for minor infractions.

Below, the two more of the variables used in moderation analysis are shown regarding their relationship to revocation (Number of PO contacts and Drug Use). These also show a clear linear relationship (p value .001 to .000) between revocation and all predictor values. Several variables however should be considered with caution with respect to temporality, as naturally there would be less exposure for PO contacts, drug tests and months employed if the offender is revoked. Treatment groups experienced more revocations as Urban insecurity increased (p value: .019). Revocation significantly decreased with respect to employment, the highest levels of PO contacts, low historical risk and no failed drug tests after release.

Table 15:
Supervision-related Characteristics by Revocation Outcomes of Offenders Released in the CPI study

Explanatory Factors related to Supervision	Overall N=707	Revoked N=186	Not Revoked N=521
Sentenced to Probation or Parole*			
Probation	409 (57.8%)	84 (20.5%)	325 (79.5%)
Parole	298 (42.2%)	102 (34.2%)	196 (65.8%)
Time Sentenced to Probation or Parole			
0-2 years	150 (21.2%)	54 (36.0%)	96 (64.0%)
2-4 years	325 (45.9%)	76 (23.4%)	249 (76.6%)
4+ years	232 (32.8%)	56 (24.1%)	176 (75.9%)
Number of PO Contacts			
0 – 5	210 (29.7%)	61 (29.1%)	149 (70.9%)
6 – 15	260 (36.8%)	77 (29.6%)	183 (70.4%)
16 – 68	237 (33.5%)	48 (20.3%)	189 (79.7%)
Treatment vs Control*			
Treatment	330 (46.7%)	126 (26.3%)	251 (73.7%)
Control	377 (53.3%)	60 (18.2%)	270 (81.8%)

Failed Drug Tests***			
0	426 (60.3%)	91 (21.4%)	335 (78.6%)
1+	281 (39.7%)	95 (33.8%)	186 (66.2%)
Arrested during CPI*			
0	268 (37.9%)	0 (0%)	268 (51.4%)
1	260 (36.8%)	115 (44.2%)	145 (27.8%)
2+	179 (25.3%)	71 (36.5%)	108 (20.8%)

4.3.3 Results of Moderation Analysis

As seen in Table 17, the moderation analysis yielded two significant interactions between the moderator of Urban Insecurity, revocation and the independent variables.

1) There was an overall non-significant p value for the interaction term ($\beta_3 Urban$ $Insecurity_i*POcontacts_{i)}$.

    (p = .94)

2) There was a non-significant interaction term in the moderation regression for Employment consistency for the interaction term ($\beta_3 Urban\ Insecurity_i*work_i + e_j$)

    (p = .31).

3) There was a strong moderation of Urban Insecurity on the association of recidivism risk and revocation regarding the interaction term ($\beta_3 Urban\ Insecurity_i*CrimRisk_i$),

    (p = .000).

4) There was a non-significant interaction term in the moderation of Urban Insecurity on the relationship of Failed Drug tests to Revocation ($\beta_3 Urban\ Insecurity_i*drugtest_i$)

    (p = .130).

Table 16:

Summary of Moderation Regression of Urban Insecurity on PO contacts, Work Consistency, Recidivism Risk and Failed Drug Tests

Urban Insecurity as Moderator	coefficient ± std err (conf interval)	p value
PO Contacts		
constant	-1.06 ±0.09 (-1.24 - -0.89)	0.00
Urban Insecurity	0.03 ±0.01 (0 - 0.05)	0.03
PO Contacts	-0.02 ±0.01 (-0.04 - -0.01)	0.00
Interaction Term	0.00 ±0.00 (0.00 - 0.00)	0.30
Work Consistency		
constant	-1.15 ±0.09 (-1.33 - -0.96)	0.00
Urban Insecurity	0.03 ±0.01 (0 - 0.05)	0.03
Work Consistency	-1.64 ±0.23 (-2.1 - -1.19)	0.00
Interaction Term	0.02 ±0.03 (-0.03 - 0.08)	0.31
Recidivism Risk		
Constant	-1.11 ±0.09 (-1.29 - -0.93)	0.00
Urban Insecurity	0.04 ±0.01 (0.01 - 0.06)	0.00
Recidivism Risk	0.55 ±0.12 (0.32 - 0.78)	0.00
Interaction Term	-0.05 ±0.02 (-0.08 - -0.01)	0.01
Failed Drug Test		
Constant	-1.07 ±0.09 (-1.24 - -0.89)	0.00
Urban Insecurity	0.02 ±0.01 (0 - 0.04)	0.10
Failed Drug Test	0.6 ±0.18 (0.25 - 0.94)	0.00
Interaction Term	0.03 ±0.02 (-0.01 - 0.08)	0.13
*full model interaction term		

As previously mentioned, a non-traditional approach was taken for the Analysis of Slopes using the Johnson-Neyman Technique to partial the significant incremental effects of moderation that not immediately clear in the overall model statistics. Note that the Johnson-Neyman technique generates approximately 21 partitions of significance and each area (called the Zone of Significance). The level of the moderator and effect size along with the p values are given and allow for a more sensitive discussion of the mechanism of moderation and the levels at which it occurs.

4.3.3.1 Probation and Parole Contacts

Figure 54: Moderation of Urban Insecurity on the relationship of PO Contacts to Revocation using the Johnson-Neyman technique
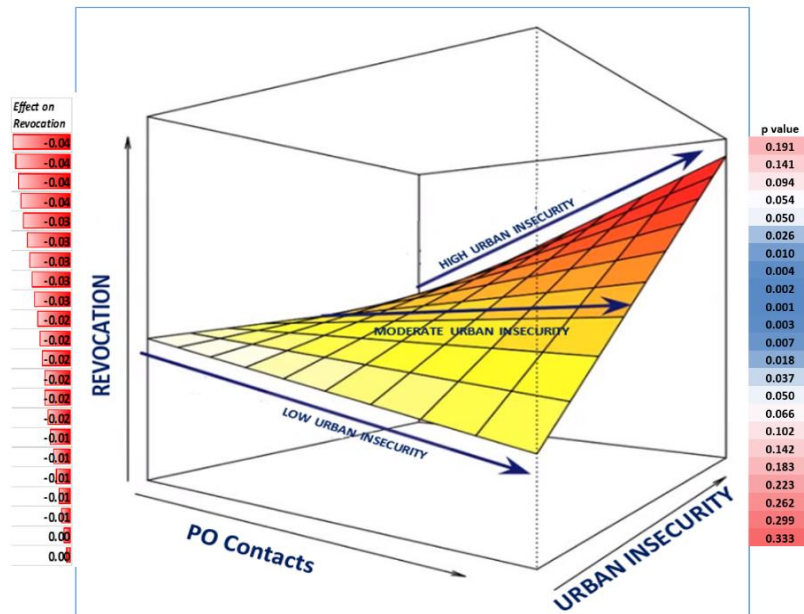
In Figure 24, PO contacts had a significant negative effect on revocation regarding those areas experiencing moderate to moderate-high Urban Insecurity. While the negative effect of PO contacts on revocation was consistent across the moderation analysis, it appears that the most effective use of increased PO contacts to avert revocation would occur in the higher insecure areas.

4.3.3.2 Employment Consistency

Figure 65: Moderation of Urban Insecurity on the relationship of Work Consistency to Revocation using the Johnson-Neyman
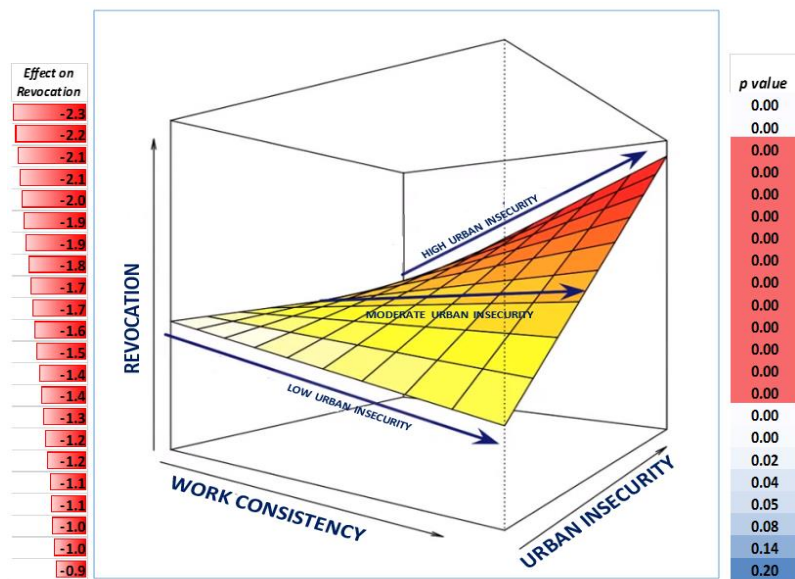
Insecurity at its lowest levels has no impact on the relationship between employment and revocation. However, the zone of significance begins at low Urban Insecurity and there remains a consistently significant

and relationship throughout. A protective effect on probability of revocation is exerted by regular work, with increases in magnitude as Urban Insecurity increases. This effect progressively increases doubling its incremental effect size in areas of the highest Urban Insecurity. This finding implies that an offender that is able to secure employment and work consistently, is less likely to revoke, even at the highest levels of Urban Insecurity. The difficulty with this finding is the discovery in the creation of the Urban Insecurity Index, which demonstrated Unemployment and low access to work as a significant contributor to Concentrated Deprivation.

4.3.3.3 Recidivism Risk

Figure 76: Moderation of Urban Insecurity on the relationship of Recidivism Risk to Revocation using the Johnson-Neyman technique
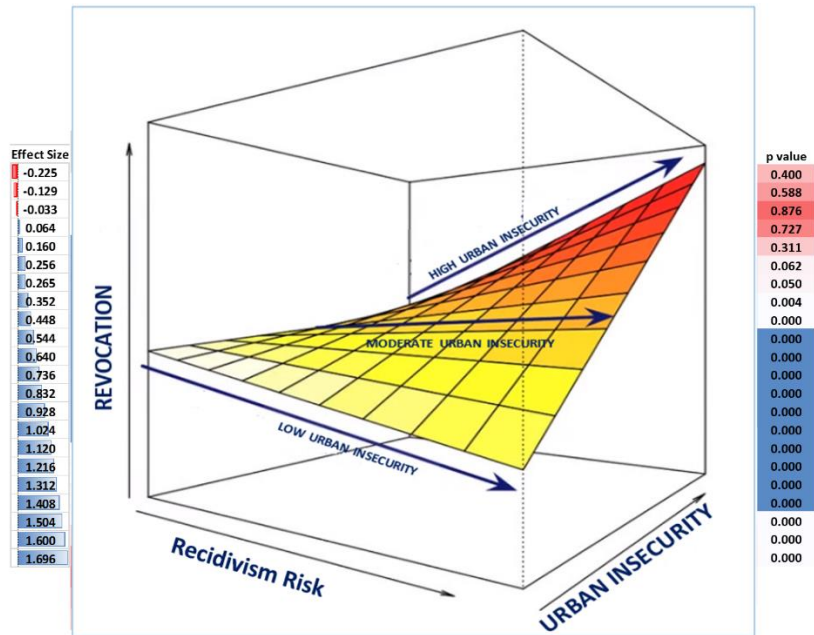
From low to moderate-high Urban Insecurity, the relationship of recidivism risk to revocation has a strong positive association. Recidivism risk can be thought of as criminal proclivity, and this area of moderation implies one of two possibilities. Offenders released into more secure areas are more likely to be detected and apprehended for new crime. Also, there is the potential for offenders, who release into more affluent area see more opportunity to commit crime. Clearly a different dynamic occurs with Urban Insecurity is at its highest levels. There is a loss in the significance of the interaction term, as well as a change in the direction of the effect size. This could imply a potential protection from revocation in the most insecure areas.

4.3.3.4 Drug Use

In Figure 27, there is clear association visible in the zone of significance implying the effect of drug use on revocation is less important in areas of low to moderate Urban Insecurity. The converse is that in areas of moderate to high insecurity, the impact on revocation is far more significant with an increasing effect size.

Figure 87: Moderation of Urban Insecurity on the relationship of Failed Drug tests to Revocation using the Johnson-Neyman technique to partial Effect Size and Significance
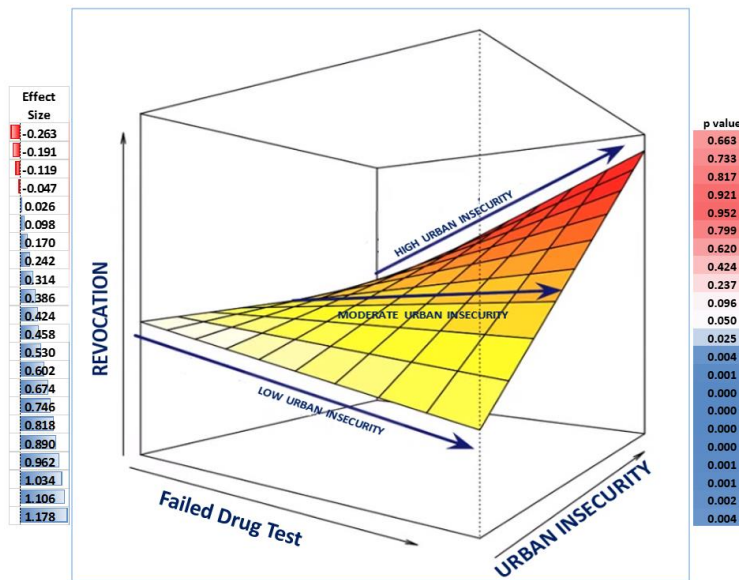
As seen in Figure 27, the low to moderate areas of Urban Insecurity, there were significant positive associations between Failed drug tests and revocation. This is a counter-intuitive finding as much of the drug trade and drug crimes are detected in the more insecure areas. There are several reasons why the association of the moderator might be lost at this juncture, specifically referring to the difference between drug sales and drug use. Other possibilities may refer to the protective effect in high insecurity areas wherein crimes are kept away from the eye of the criminal justice system in order to avoid interaction.

4.4 Discussion

This research attempted to identify a process or number of processes that are persistently occurring in the environment, with quiet but insidious consequences. This research sought to investigate the nature of ecological variables that are essentially a physical expression of disparity, inequality, severe and chronic poverty, involved in family disruption, crime and violence, and see how it affects the vulnerable within. The initial findings of the moderation of Urban Insecurity on the relationship of several independent variable important to revocation was not definitive, with only Recidivism Risk having a significant interaction term. However, using the Johnson-Neyman technique, it was possible to perform a more sensitive analysis to determine the dynamics of these relationships at multiple high, medium and low increments.

What was discovered were patterns, all of which likely need qualitative and quantitative data to validate them. For example, PO contacts, in regression analysis with revocation has a highly significant association. However, in the moderation analysis, we see that in areas of high and low Urban Insecurity, the impact of this effect wanes. This finding would be easily verified by the PO officers I have interviewed for LA DPS&C, that refer to groups that need no supervision and will commit no further crimes, groups that will always commit crimes and always return to prison, and those in between who are responsive to help. This approach, unfortunately repeats the individual risk mindset (Mooney & Daffern, 2014; Sherman et al., 2015). While others like Kirk, and his naturalistic study of return to crime pre- and post- Katrina, that shown a change in environment produced a far better outcome.

The relationships drawn from ecological variables are not often straightforward. Many times the ecology of a city, community or a neighborhood transform in ways that are not identifiable to its inhabitants (Condron, 2009). When does a community know that is have been marginalized from structural factors that exist in other parts of the city? What is their spoken and unspoken response? There are very few jobs available for low-skill applicants in Orleans Parish with felony records and repeat incarcerations. Considering Structural Inequality however, in the contexts of individual vulnerabilities, Why is the offender a low-skill in the first place? (Bellair & Kowalski, 2015). The ubiquitous presence of poor and underperforming schools in Orleans Parish is well documented (Carpenter et al., 2010; Kirk, 2012). Educational deficiencies translate to crime risk as 68.54% of the CPI study cohort had less than a High School diploma or GED. Similarly, a study of 7061 released offenders in Philidelphia, PA revealed 68% of its released offenders had less than a High School diploma or GED (Justice, 2009). The effect is intensified in an environment of structural racism (Steinmetz et al., 2015). Preferential hiring of White over Black released offenders, even with more intense criminal histories, further worsens the reentry process (Bellair et al., 2015; Chauhan et al., 2009).

As stated in the introduction of this dissertation, the processes by which Urban Insecurity is produced is very likely the direction out. Very few studies have attached this problem from stabilizing the role of the governement, police force, military and municipaities to solve the insecurity problem (Robert Muggah, 2013; Nasser et al., 1990; Sepulveda &

Syrett, 2007), far less in the American context. However, in a study of 2,309 residents of Kentucky, Louisville, and Lexington Texas, the relationship of sub-cultural forces, and drug trade were shown to function together to mediate negative social control, allowing for higher rates of violence and violent crime such as armed robbery. Subsequently, as urban structural conditions were restored, so did the type and magnitude of positive social control needed to reverse robbery trends (Berg & Rengifo, 2009).

Similar efforts have transpired in Liberia, Brazil and Columbia, as governments begin to institute pacification and stabilization strategies to combat insecurity generated as structural factors impact individual and community mechanism of survival in constrained environments (Blattman, 2015; Lamb, 2010; Moser & McIlwaine, 2006; Peres et al., 2012). Spatial studies of this phenomenon allow scientists and policy-makers greater 'views' of the terrain and the many responsibilities of the state, including the proliferation of microenvironments of marginalization and insecurity (Chauhan et al., 2009; Messer et al., 2006; ten Bensel et al., 2014).

An example of an explicit mechanism influenced by structural inequality might relate to differential patterns of employment.

BIBLIOGRAPHY

Addicott, J. F., Aho, J. M., Antolin, M. F., Padilla, D. K., Richardson, J. S., Addiott, D. A. S., … Padilla, D.-K. (1346). Ecological neighborhoods: scaling environmental patterns. *OTKOS*, *49*(3).

Agnew, R. (1992). Foundation for a General Strain Theory of Crime and Delinquency. *CRIMINOLOGY*, *30*(1), 47–87.

Alinovi, L., Development, A., & Division, E. (2010). LiveLihoods strategies and househoLd resiLience to Food insecurity : an empiricaL anaLysis to Kenya, 28–30.

Alkire, S., Meinzen-dick, R., & Quisumbing, A. R. (2012). The Women ' s Empowerment in Agriculture Index, (December).

Anselin, L. (1995). Local indicators of spatial association — LISA. *Geographical Analysis*, *27*(2), 93–115. https://doi.org/10.1111/j.1538-4632.1995.tb00338.x

Apprey, M. (2006). *FRAMING SOCIAL CHANGE MANAGEMENT IN THREE MOVEMENTS: NGO FORMATION, ETHICS OF TRANSFER, AND AN ECONOMIC SOCS PRAXIS FOR CONFLICT RESOLUTION*. Case Western Reserve University.

Banfield, J., Haufler, V., & Lilly, D. (2005). Transnational Corporations in Conflict-prone Zones: Public Policy Responses and a Framework for Action. *Oxford Development Studies*, *33*(1), 133–147. https://doi.org/10.1080/13600810500099766

Baraka, A. (2014). *The Life I Chose: The Streets Lied to Me* (1st ed.). New Orleans: self published.

Baron, S. W., & Hartnagel, T. F. (2002). Street youth and labor market strain. *Journal of Criminal Justice*, *30*, 519–533. https://doi.org/10.1016/S0047-2352(02)00174-5

Belfield, C. R., & Levin, H. M. (2012). The Economics of Investing in Opportunity Youth. In *Oppotunity Nation Summit* (pp. 1–64). New York: Queens College, University of New York.

Bellair, P. E., & Kowalski, B. R. (2015). Low-Skill Employment Opportunity and African American–White Difference in Recidivism. *Journal of Research in Crime and Delinquency*, *48*(2), 176–208. https://doi.org/10.1177/0022427810391536

Berg, M. T., & Rengifo, A. F. (2009). Rethinking Community Organization and Robbery: Considering Illicit Market Dynamics. *Justice Quarterly*, *26*(2), 211–237. https://doi.org/10.1080/07418820802249096

Blattman, C. (2015). *Can Employment Reduce Lawlessness and Rebellion? A Field Experiment with High Risk Men in a Fragile State*. *National Bureau of Economic Research*. Cambridge. https://doi.org/10.1017/CBO9781107415324.004

Boggess, L. N., & Hipp, J. R. (2014). The Spatial Dimensions of Gentrification and the Consequences for Neighborhood Crime. *Justice Quarterly*, (November), 31. https://doi.org/10.1080/07418825.2014.943799

Braveman, P, Gruskin, S. (2003). Defining Equity in Health. *Journal of Epidemiology &*

Community Health, *57*, 254–258.

Brock, K. (n.d.). IMPLEMENTING A SUSTAINABLE LIVELIHOODS FRAMEWORK FOR POLICY-DIRECTED RESEARCH : REFLECTIONS FROM PRACTICE IN MALI WORKING PAPER 90.

Bronfenbrenner, U. (1994). Ecological models of human development. *Readings on the Development of Children*.

Burgess, E. W. (1967). The growth of the city. *The City*, 47–62. https://doi.org/10.2307/3004850

Campanella, R. (2006). *Geographies of New Orleans: Urban Fabrics before the Storm*. New Orleans: Center for Louisiana Studies. Retrieved from http://www.richcampanella.com/assets/pdf/Campanella_Geographies of New Orleans_Part0_Introduction and Timeline.pdf

Carpenter, A., Leone De Nie, K., Montoya, N., Mahoney, K., & Greene, T. (2010). *Optimizing Blight Strategies Deploying Limited Resources in Different Neighborhood Housing Markets About the Greater New Orleans Community Data Center*. New Orleans. Retrieved from www.gnocdc.org

Chamberlain, A. W. (2012). *Interrelationship between Neighborhood Ecology and Prisoner Reintegration*. University of California, Irvine.

Chamberlain, A. W., Boggess, L. N., & Powers, R. A. (2014). Journal of Crime and Justice The impact of the spatial mismatch between parolee and employment locations on recidivism. *Journal of Crime and Justice*, 1–23. https://doi.org/10.1080/0735648X.2014.965264

Chamberlain, A. W., & Wallace, D. (2015). Mass Reentry, Neighborhood Context and Recidivism: Examining How the Distribution of Parolees Within and Across Neighborhoods Impacts Recidivism. *Justice Quarterly*, 1–32. https://doi.org/10.1080/07418825.2015.1012095

Chauhan, P., Reppucci, N. D., & Turkheimer, E. N. (2009). Racial differences in the associations of neighborhood disadvantage, exposure to violence, and criminal recidivism among female juvenile offenders. *Behavioral Sciences & the Law*, *27*(4), 531–52. https://doi.org/10.1002/bsl.868

Claggion, J. S. (2008). *Understanding recidivism rates in Washington DC: Assessing individual and neighborhood level determinants of criminality among African-American Male Ex-Offenders . Dissertation Abstracts International Section A: Humanities and Social Sciences*. Howard University. Retrieved from http://ezp-prod1.hul.harvard.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2008-99170-503&site=ehost-live&scope=site

Clear, T., Rose, D., Waring, E., & Scully, K. (2003). Coercive Mobility and Crime: A Preliminary Examination of Concentrated Incarceration and Social Disorganization. *Justice Quarterly*, *20*(1), 33–64.

Cobbina, J. E. (2010). Reintegration Success and Failure: Factors Impacting Reintegration Among Incarcerated and Formerly Incarcerated Women. *Journal of Offender Rehabilitation*, *49*(3), 210–232. https://doi.org/10.1080/10509671003666602

Collinson, S., Elhawary, S., & Muggah, R. (2010). States of fragility: Stabilisation and its implications for humanitarian action. *Disasters*, *34*(SUPPL. 3), 275–296. https://doi.org/10.1111/j.1467-7717.2010.01206.x

Committee, A. (n.d.). SUSTAINABLE LIVELIHOODS GUIDANCE SHEETS FRAMEWORK INTRODUCTION VULNERABILITY TRANSFORMING. *Context*.

Committee, I., & Cross, R. (2007). *International humanitarian law and the challenges of contemporary armed conflicts*. *International Review of the Red Cross* (Vol. 89). Geneva. https://doi.org/10.1017/S1816383107001294

Condron, D. (2009). Social Class, School and Non-School Environments, and Black/White Inequalities in Children's Learning. *American Sociological Review*, *74*(October), 683–708.

Davis, D. (2012). *Urban Resilience in Situations of Chronic Violence: Book*. Retrieved from http://web.mit.edu/cis/urbanresiliencereport2012.pdf

Davis, G. M. (2014). *EXPLORING THE EFFECTS OF EX-PRISONER REENTRY ON STRUCTURAL FACTORS IN DISORGANIZED COMMUNITIES: IMPLICATIONS FOR LEADERSHIP PRACTICE*. Antioch University.

Dean, C. W., & Piquero, A. R. (1996). CRIMINAL PROPENSITIES, DISCRETE GROUPS OF OFFENDERS, AND PERSISTENCE IN CRIME*. *CRIMINOLOGY*, *34*(4), 547–574.

Decker, S., & Pyrooz, D. (2011). Journal of Strategic Security. *Journal of Strategic Security*, *4*(4), 151–166. Retrieved from http://scholarcommons.usf.edu/jss

Dickson, S. R., Polaschek, D. L. L., & Casey, A. R. (2013). Can the quality of high-risk violent prisoners' release plans predict recidivism following intensive rehabilitation? A comparison with risk assessment instruments. *Psychology, Crime & Law*, *19*(4), 371–389. https://doi.org/10.1080/1068316X.2011.640634

Distefano, C., Zhu, M., & Mîndrilă, D. (2009). Understanding and using factor scores: Considerations for the applied researcher. *Practical Assessment, Research & Evaluation*, *14*(20), 1–11.

Elo, I. T., Mykyta, L., Margolis, R., & Culhane, J. F. (2010). Perceptions of Neighborhood Disorder: The Role of Individual and Neighborhood Characteristics. *National Institutes of Health, NIH Public Access*, *90*(5), 1–21. https://doi.org/10.1111/j.1540-6237.2009.00657.x.Perceptions

Fenton, W., Kent, R., Luu, K., Programme, H. F., Resilience, D., & Academy, L. (n.d.). ALNAP STUDY: Leadership in Action.

Food and Agriculture Organization of the United Nations, Rome and International Labour Organization, G. (2007). The Livelihood Assessment Tool-kit Analysing and responding to the impact of disasters on the livelihoods of people. *October*. Retrieved from http://ler.itcilo.org/ler-roll-out-in-south-kivu-drc/livelihood-assessment-toolkit-and-ler-guides-in-french/livelihood-assessment-toolkit-english-1

Geller, A., Garfinkel, I., & Western, B. (2006). The Effects of Incarceration on Employment and Wages An Analysis of the Fragile Families Survey. *Center for Research on Child Wellbeing Working Paper*, *01-FF*(August), 1–35.

Godesso, A. (2008). A thesis submitted to the School of Graduate Studies of Addis Ababa University in partial fulfillment of the requirements for the Degree of Master of Arts in Sociology. In *Control*.

Gorman, D. M., Speer, P. W., Gruenewald, P. J., & Labouvie, E. W. (2001). Spatial dynamics of alcohol availability, neighborhood structure and violent crime. *Journal of Studies on Alcohol*, *62*, 628–636.

Grunwald, H. E., Lockwood, B., Harris, P. W., & Mennis, J. (2010). Influences of neighborhood context, individual history and parenting behavior on recidivism among juvenile offenders. *Journal of Youth and Adolescence*, *39*(9), 1067–1079. https://doi.org/10.1007/s10964-010-9518-5

Grunwald, H., Harris, P., Mennis, J., Obradovic, Z., Izenman, A., & Lockwood, B. (2007). Predicting Recidivism: Analyzing the Effects of Individual, Program and Neighborhoods with Cross-Classified Hierarchical Generalized Linear Modeling. In *Conference Papers -- American Society of Criminology* (pp. 1–8). Retrieved from http://0-search.ebscohost.com.maurice.bgsu.edu/login.aspx?direct=true&db=sih&AN=34676827&login.asp&site=ehost-live&scope=site

Gutierrez, L., Wilson, H. A., Rugge, T., & Bonta, J. (2013). The Prediction of Recidivism with Aboriginal Offenders: A Theoretically Informed Meta-Analysis1. *Canadian Journal of Criminology and Criminal Justice/La Revue Canadienne de Criminologie et de Justice Pénale*, *55*(1), 55–99. https://doi.org/10.3138/cjccj.2011.E.51

Hipp, J. R., Petersilia, J., & Turner, S. (2010). Parolee Recidivism In California: The Effect Of Neighborhood Context And Social Service Agency Characteristics. *Criminology*, *48*(4), 947–979. https://doi.org/10.1111/j.1745-9125.2010.00209.x

Horgan, J., & Braddock, K. (2010). Rehabilitating the Terrorists?: Challenges in Assessing the Effectiveness of De-radicalization Programs. *Terrorism and Political Violence*, *22*(2), 267–291. https://doi.org/10.1080/09546551003594748

ISS-ICRC. (2012). *Urban violence and humanitarian challenges: Joint Report*. *Urban violence and humanitarian challenges*. Geneva. https://doi.org/10.2815/28829

James, N. (2015). Offender Reentry: Correctional Statistics, Reintegration into the Community, and Recidivism Analyst in Crime Policy.

Justice, M. of. (2009). *Theories of the Causes of Crime*.

Kijewski-Correa, T., & Taflanidis, A. a. (2011). The Haitian housing dilemma: can sustainability and hazard-resilience be achieved? *Bulletin of Earthquake Engineering*, *10*(3), 765–771. https://doi.org/10.1007/s10518-011-9330-y

Kirk, D. S. (2009). A Natural Experiment on Residential Change and Recidivism: Lessons from Hurricane Katrina. *American Sociological Review*, *Vol 74*(June), 484–505.

Kirk, D. S. (2012). Residential change as a turning point in the life course of crime: Desistance or temporary cessation? *Criminology*, *50*(2), 329–358. https://doi.org/10.1111/j.1745-9125.2011.00262.x

Kubrin, C. E. (2005). Gangstas, Thugs, and Hustlas: Identity and the Code of the Street in Rap Music. *Social Problems*, *52*(3), 360–378. https://doi.org/10.1525/sp.2005.52.3.360

Kubrin, C. E., & Stewart, E. a. (2006). Predicting who reoffends: The neglected role of neighborhood context in recidivism studies. *Criminology*, *44*(1), 165–197. https://doi.org/10.1111/j.1745-9125.2006.00046.x

Kubrin, C. E., & Weitzer, R. (n.d.). NEW DIRECTIONS IN SOCIAL DISORGANIZATION THEORY. https://doi.org/10.1177/0022427803256238

Lamb, R. D. (2010). *Microdynamics of illegitimacy and complex urban violence in Medellin, Colombia*. *ProQuest Dissertations and Theses*. Univerity of Maryland. Retrieved from http://ezproxy.nottingham.ac.uk/login??url=http://search.proquest.com/docview/733012990?accountid=8018\nhttp://sfx.nottingham.ac.uk/sfx_local/?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:dissertation&genre=dissertations+&+theses&sid=ProQ:ProQuest

Langes, L. E. C. (2012). *Resiliency in Urban Youth with Disruptive Behavior Disorders Exposed to Chronic Community Violence: A Profile Analysis*. *ProQuest Dissertations and Theses*. Chicago School of Professional Psychology. Retrieved from http://search.proquest.com/docview/1022032107?accountid=14553\nhttp://openurl.library.uiuc.edu/sfxlcl3?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:dissertation&genre=dissertations+&+theses&sid=ProQ:ProQuest+Dissertations+&+Theses+Full+Text&atitle

Martinez, D. J. (2010). Role accumulation theory and prisoner reintegration The pursuit of transformative social roles..pdf. *The Journal of Community and Criminal Justice*, *57*(2), 139–151. https://doi.org/10.1177/0264550510362560

Mason, T. D. (2010). *THE EFFECT OF ECOLOGICAL SUSTAINABILITY ON INTERSTATE AND INTRASTATE*. University of North Texas.

Massey, D. S. (1990). American Apartheid: Segregation and the Making of the

Underclass'. *American Journal of Sociology*, *96*(2), 329–357.

Menezes-Filho, N., & Vasconcellos, L. (2004). " Operationalising Pro-Poor Growth " A joint initiative of AFD, BMZ (GTZ, KfW Development Bank), DFID, and the World Bank A Country Case Study on Brazil.

Merlo, J. (2003). Multilevel analytical approaches in social epidemiology: measures of health variation compared with traditional measures of association. *Journal of Epidemiology and Community Health*, *57*(8), 550–552. https://doi.org/10.1136/jech.57.8.550

Merlo, J. (2005). A brief conceptual tutorial of multilevel analysis in social epidemiology: linking the statistical concept of clustering to the idea of contextual phenomenon. *Journal of Epidemiology & Community Health*, *59*(6), 443–449. https://doi.org/10.1136/jech.2004.023473

Merlo, J. (2006). A brief conceptual tutorial of multilevel analysis in social epidemiology: using measures of clustering in multilevel logistic regression to investigate contextual phenomena. *Journal of Epidemiology & Community Health*, *60*(4), 290–297. https://doi.org/10.1136/jech.2004.029454

Messer, L. C., Laraia, B. A., Kaufman, J. S., Eyster, J., Holzman, C., Culhane, J., … O'Campo, P. (2006). The development of a standardized neighborhood deprivation index. *Journal of Urban Health*, *83*(6), 1041–1062. https://doi.org/10.1007/s11524-006-9094-x

Miller, J., Copeland, K., & Sullivan, M. (2015). Keeping Them Off the Corner: How Probation Officers Steer Offenders Away From Crime Opportunities. *The Prison Journal*, *95*(2), 178–198. https://doi.org/10.1177/0032885515575263

Milliken, J., & Krause, K. (2002). Making states work: State failure and the crisis of governance. *Development and Change*, *33*(5), 753–774. Retrieved from https://books.google.co.uk/books?hl=en&lr=&id=V7EibJ74C-UC&oi=fnd&pg=PR8&dq=making+states+work&ots=nib-W09VYd&sig=EwUpPtXw6xAG8vBm4vvCmKnCWV8

Mitchell, O., Wilson, D. B., Eggers, A., & MacKenzie, D. L. (2012). Assessing the effectiveness of drug courts on recidivism: A meta-analytic review of traditional and non-traditional drug courts. *Journal of Criminal Justice*, *40*(1), 60–71. https://doi.org/10.1016/j.jcrimjus.2011.11.009

Mooney, J. L., & Daffern, M. (2014). The relationship between aggressive behaviour in prison and violent offending following release. *Psychology, Crime & Law*, *21*(4), 314–329. https://doi.org/10.1080/1068316X.2014.989163

Morenoff, J. D., & Harding, D. J. (2014). Incarceration, Prisoner Reentry, and Communities. *Annual Review of Sociology*, *40*, 411–429. https://doi.org/10.1146/annurev-soc-071811-145511

Morenoff, J. D., Sampson, R. J., & Raudenbush, S. W. (2001). Neighborhood Inequality,

Collective Efficacy, and the Spacial Dynamics of Urban Violence. *Criminology*, *39*(3), 517–559. https://doi.org/10.1111/j.1745-9125.2001.tb00932.x

Moser, C. O. N., & McIlwaine, C. (2006). Latin American urban violence as a development concern: Towards a framework for violence reduction. *World Development*, *34*(1), 89–112. https://doi.org/10.1016/j.worlddev.2005.07.012

Muggah, R. (2010). *The effects of stabilisation on humanitarian action in Haiti*. *Disasters* (Vol. 34). https://doi.org/10.1111/j.1467-7717.2010.01205.x

Muggah, R. (2012). Researching the Urban Dilemma: Urbanization, Poverty and Violence. *Ottawa: Centro Internacional de Investigaciones Para …*, 1–118. Retrieved from http://www.iadb.org/intal/intalcdi/PE/2012/12203.pdf

Muggah, R. (2013). Stabilization Operations, Security and Development. In *Ending Wars, Consolidating Peace: Economic Perspective* (pp. 33–52). London: Adelphi Papers. https://doi.org/10.4324/9780203641514

Muggah, R. (2014). Deconstructing the fragile city: exploring insecurity, violence and resilience. *Environment and Urbanization*, *26*(2), 345–358. https://doi.org/10.1177/0956247814533627

Muggah, R. (2015). The Invisible Displaced: A Unified Conceptualization of Population Displacement in Brazil. *Journal of Refugee Studies*, (December), feu033–. https://doi.org/10.1093/jrs/feu033

Muggah, R., & O'Donnell, C. (2015). Next Generation Disarmament , Demobilization and Reintegration. *International Journal of Security and Development*, *4*(30), 1–12. https://doi.org/10.5334/sta.fs

Nally, J. M., Lockwood, S., Ho, T., & Knutson, K. (2014). Post-Release Recidivism and Employment among Different Types of Released Offenders: A 5-Year follow-up Study in the United States. *International Journal of Criminal Justice Sciences*, *9*(1), 16–34. Retrieved from http://search.proquest.com.ezp-prod1.hul.harvard.edu/docview/1557153003?accountid=11311\nhttp://sfx.hul.harvard.edu/hvd?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&genre=article&sid=ProQ:ProQ:criminaljusticeperiodicalsshell&atitle=Post-Re

Nasser Pendatun Lidasan, by B., Karp Directj, R., & Sphulman ember Thomas Chapm, -Petfefc M. (1990). THE COMPLEXITY OF ARMED CONFLICT IN MINDANAO: BEYOND ECONOMIC DEPRIVATION, DISCRIMINATION, AND INEQUALITY.

Nations, U., & Settlements, H. (2011). United Nations Human Settlements Programme, Planning Sustainable Cities: Global Report on Human Settlements 2009 (UN HABITAT and Earthscan), 2009. *Environment and Urbanization Asia*, *2*(1), 149–149. https://doi.org/10.1177/097542531000200111

Ostermann, M. (2015). How do Former Inmates Perform in the Community? A Survival

Analysis of Rearrests, Reconvictions, and Technical Parole Violations. *Crime & Delinquency*, *61*(2), 163–187. https://doi.org/10.1177/0011128710396425

Ousey, G. C., & Kubrin, C. E. (2009). Exploring the Connection between Immigration and Violent Crime Rates in U . S . Cities, 1980 – 2000. *Social Problems*, *56*(3), 447–473. https://doi.org/10.1525/sp.2009.56.3.447.448

Pager, D. (2008). Study: Black man and white felon, same chances for hire. *CNN's Black in America*. Retrieved from http://www.blackamericaweb.com/?q=articles/news/baw_commentary_news/37405

Parker, K. (2000). Poverty, Poverty Concentration and Homicide. *Social Science*, *81*(2), 555–570.

Paynich, R., & Hill, B. (2010). Social Disorganization and Social Efficacy. In *Fundamentals of Crime Mapping: principles and practice* (pp. 53–96).

Peres, M., Almeida, J., Ruotti, C., & Nery, M. (2012). Homicide fall in Sao Paulo municipality, Brazil: the role of public security indicators. *Injury Prevention*, *18*(Supplement 1), A144–A144. https://doi.org/10.1136/injuryprev-2012-040590j.12

Phelps, M. (2013). The paradox of probation: Community supervision in the age of mass incarceration. *Law & Policy*, *35*(1-2), 51–80. https://doi.org/10.1111/lapo.12002

Pryor, M. (2010). The unintended effects of prisoner reentry policy and the marginalization of urban communities. *Dialectical Anthropology*, *34*(4), 513–517. https://doi.org/10.1007/s10624-010-9207-5

Purcell, M. C. (2007). *Surviving inner-city war zones: Trauma and resiliency among urban youth exposed to community violence. Dissertation Abstracts International: Section B: The Sciences and Engineering*.

Ribetti, M. (2002). *SOME CONFLICTS MAY NOT END: THE STABILITY OF PROTRACTED VIOLENCE IN COLOMBIA*. University of Texas at Austin.

Sampson, R. J., & Graif, C. (2009). Neighborhood Social Capital as Differential Social Organization. Resident and Leadership Dimensions. *American Behavioral Scientist*, *52*(11), 1579–1605. https://doi.org/10.1177/0002764209331527

Sampson, R. J., & Laub, J. H. (2005). A life-course view of the development of crime. *The Annals of the American Academy of Political and Social Science*, *602*(1), 12–45. https://doi.org/10.1177/0002716205280075

Sampson, R. J., Morenoff, J. D., & Gannon-Rowley, T. (2002). ASSESSING " NEIGHBORHOOD EFFECTS " : Social Processes and New Directions in Research. *Annu. Rev. Sociol*, *28*, 443–78. https://doi.org/10.1146/annurev.soc.28.110601.141114

Sampson, R. J., Morenoff, J. D., & Raudenbush, S. (2005). SocialaAnatomy of racial and ethnic disparities in violence. *American Journal of Public Health*, *95*(2), 224–232. https://doi.org/10.2105/AJPH.2004.037705

Sampson, R. J., & Raudenbush, S. W. (1999). Systematic Social Observation of Public

163

Spaces: A New Look at Disorder in Urban Neighborhoods. *American Journal of Sociology*, *105*(3), 603–651. https://doi.org/10.1086/210356

Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: a multilevel study of collective efficacy. *Science (New York, N.Y.)*, *277*(5328), 918–924. https://doi.org/10.1126/science.277.5328.918

Sampson, R. J., Sharkey, P., & Raudenbush, S. W. (2008). Durable effects of concentrated disadvantage on verbal ability among African-American children. *Proceedings of the National Academy of Sciences of the United States of America*, *105*(3), 845–852. https://doi.org/10.1073/pnas.0710189104

Sepulveda, L., & Syrett, S. (2007). Out of the shadows? Formalisation approaches to informal economic activity. *Policy & Politics*, *35*(1), 87–104. https://doi.org/10.1332/030557307779657739

Sevigny, E. L., Fuleihan, B. K., & Ferdik, F. V. (2013). Do drug courts reduce the use of incarceration?: A meta-analysis. *Journal of Criminal Justice*, *41*(6), 416–425. https://doi.org/10.1016/j.jcrimjus.2013.06.005

Shah, B. (1988). THE CITY IN CHANGE: Socio-spatial dimensions of urban environmental change. *Biresh Shah*.

SHAW, & McCAY. (1942). *Juvenile Deliquency and Urban Areas*. Chicago: University of Chicago Press.

Sherman, L. W., Heather Strang, B., Evan Mayo-Wilson, B., Daniel Woods, B. J., Barak Ariel, B., Sherman Á H Strang, L. W., … Ariel, B. (2015). Are Restorative Justice Conferences Effective in Reducing Repeat Offending? Findings from a Campbell Systematic Review Conclusion RJCs are a cost-effective means of reducing frequency of recidivism. *J Quant Criminol*, *31*, 1–24. https://doi.org/10.1007/s10940-014-9222-9

Speer, P. W., Gorman, D. M., Labouvie, E. W., & Ontkush, M. J. (1998). Violent Crime and Alcohol Availability: Relationships in an Urban Community. *Source Journal of Public Health Policy*, *1981101*(3), 303–318. Retrieved from http://www.jstor.org

Stahler, G., Mennis, J., Belenko, S., Welsh, W., Hiller, M., & Zajac, G. (2013). Predicting recidivism for released state prison offenders: Examining the influence of individual and neighborhood characteristics and spacial contagion on the likelihood of reincarceration. *Criminal Justice and Behavior*, *40*(6), 690–711.

Steinmetz, K. F., & Henderson, H. (2015). On the Precipice of Intersectionality: The Influence of Race, Gender, and Offense Severity Interactions on Probation Outcomes. *Criminal Justice Review*, 1–17. https://doi.org/10.1177/0734016815577194

Stern, J. (2010). *Deradicalization or Disengagement? Future Challenges in National Security and Law*. https://doi.org/10.1097/01.AOG.0000443274.83522.9a

Sutherland, E. H. (1947). *Principles of criminology* (4th ed.). Chicago: Chicago, J. B.

Lippincott Co.

Swartz, C. (2010). *Offender recidivism and neighborhood environments*. *ProQuest Dissertations and Theses*. City University of New York.

ten Bensel, T., Gibbs, B., & Lytle, R. (2014). A Propensity Score Approach towards Assessing Neighborhood Risk of Parole Revocation. *American Journal of Criminal Justice*, *40*(2), 377–398. https://doi.org/10.1007/s12103-014-9269-z

Theall, K. P., Scribner, R., Cohen, D., Bluthenthal, R. N., Schonlau, M., Lynch, S., & Farley, T. A. (2009). The neighborhood alcohol environment and alcohol-related morbidity. *Alcohol and Alcoholism*, *44*(5), 491–499. https://doi.org/10.1093/alcalc/agp042

Theall, K. P., Scribner, R., Ghosh-Dastidar, B., Cohen, D., Mason, K., & Simonsen, N. (2009). Neighbourhood alcohol availability and gonorrhea rates: impact of social capital. *Geospat Health*, *3*(2), 241–255. https://doi.org/10.4081/gh.2009.224

Thomas, J. C., & Torrone, E. (2006). Incarceration as Forced Migration: Effects on Selected Community Health Outcomes. *American Journal of Public Health J Public Health*, *9696*(10), 1762–1765. https://doi.org/10.2105/AJPH.2005.081760

Tillyer, M. S., & Vose, B. (2011). Social ecology, individual risk, and recidivism: A multilevel examination of main and moderating influences. *Journal of Criminal Justice*, *39*(5), 452–459. https://doi.org/10.1016/j.jcrimjus.2011.08.003

Townsend, P. (1979). Poverty in the United Kingdom A Survey of Household Resources and Standards of Living.

Uchida, C. D., Swatt, M. L., Solomon, S. E., & Varano, S. (2014). *U.S. Department of Justice: Neighborhoods and Crime: Collective Efficacy and Social Cohesion in Miami-Dade County*.

UNODC. (2013). *Global Study on Homicide 2013*. *Unodoc*. https://doi.org/10.1016/j.jcv.2011.08.025

Vilalta, C., & Muggah, R. (2014). Violent disorder in Ciudad Juarez: a spatial analysis of homicide. *Trends in Organized Crime*, *17*(3), 161–180. https://doi.org/10.1007/s12117-014-9213-0

Vyas, S., & Kumaranayake, L. (2006). Constructing socio-economic status indices: how to use principal components analysis. *Health Policy and Planning*, *21*(6), 459–68. https://doi.org/10.1093/heapol/czl029

Walker, B., Carpenter, S., Anderies, J., Abel, N., Cumming, G., Janssen, M., … Pritchard, R. (2002). Resilience Management in Social-ecological Systems : a Working Hypothesis for a Participatory Approach, *6*(1).

Wallace, D. (2015). Do Neighborhood Organizational Resources Impact Recidivism? *Sociological Inquiry*, *85*(2), 285–308. https://doi.org/10.1111/soin.12072

Webster, C., MacDonald, R., & Simpson, M. (2006). Predicting Criminality? Risk Factors, Neighbourhood Influence and Desistance. *Youth Justice*, *6*(1), 7–22.

https://doi.org/10.1177/1473225406063449

Wilkinson, D. (2001). Violent events and social identity: Specifying the relationship between respect and masculinity in inner-city youth violence. In *Sociological Studies of Children and Youth (Sociological Studies of Children and Youth, Volume 8)* (Kinney, D, pp. 235–269). Emerald Group Publishing Limited.

Williams, N. E. (2009). *LIVING WITH CONFLICT: THE EFFECT OF COMMUNITY ORGANIZATIONS, ECONOMIC ASSETS, AND MASS MEDIA CONSUMPTION ON MIGRATION DURING ARMED CONFLICT*. University of Michigan.

Wilson, W. J. (2011). When Work Disappears. *Political Science Quarterly*, *111*(4), 567–595. https://doi.org/10.2307/2152085

Yu, Q., Scribner, R., Carlin, B., Theall, K., Simonsen, N., Ghosh-Dastidar, B., … Mason, K. (2008). Multilevel spatio-temporal dual changepoint models for relating alcohol outlet destruction and changes in neighbourhood rates of assaultive violence. *Geospat Health*, *2*(2), 161–172. https://doi.org/10.4081/gh.2008.240

Zhu, L., Gorman, D. M., & Horel, S. (2006). Hierarchical Bayesian spatial models for alcohol availability, drug "hot spots" and violent crime. *Int J Health Geogr*, *5*, 54. https://doi.org/10.1186/1476-072x-5-54

Addicott, J. F., Aho, J. M., Antolin, M. F., Padilla, D. K., Richardson, J. S., Addiott, D. A. S., … Padilla, D.-K. (1346). Ecological neighborhoods: scaling environmental patterns. *OTKOS*, *49*(3).

Agnew, R. (1992). Foundation for a General Strain Theory of Crime and Delinquency. *CRIMINOLOGY*, *30*(1), 47–87.

Alinovi, L., Development, A., & Division, E. (2010). LiveLihoods strategies and househoLd resiLience to Food insecurity : an empiricaL anaLysis to Kenya, 28–30.

Alkire, S., Meinzen-dick, R., & Quisumbing, A. R. (2012). The Women ' s Empowerment in Agriculture Index, (December).

Anselin, L. (1995). Local indicators of spatial association — LISA. *Geographical Analysis*, *27*(2), 93–115. https://doi.org/10.1111/j.1538-4632.1995.tb00338.x

Apprey, M. (2006). *FRAMING SOCIAL CHANGE MANAGEMENT IN THREE MOVEMENTS: NGO FORMATION, ETHICS OF TRANSFER, AND AN ECONOMIC SOCS PRAXIS FOR CONFLICT RESOLUTION*. Case Western Reserve University.

Banfield, J., Haufler, V., & Lilly, D. (2005). Transnational Corporations in Conflict-prone Zones: Public Policy Responses and a Framework for Action. *Oxford Development Studies*, *33*(1), 133–147. https://doi.org/10.1080/13600810500099766

Baraka, A. (2014). *The Life I Chose: The Streets Lied to Me* (1st ed.). New Orleans: self published.

Baron, S. W., & Hartnagel, T. F. (2002). Street youth and labor market strain. *Journal of

Criminal Justice, *30*, 519–533. https://doi.org/10.1016/S0047-2352(02)00174-5

Belfield, C. R., & Levin, H. M. (2012). The Economics of Investing in Opportunity Youth. In *Oppotunity Nation Summit* (pp. 1–64). New York: Queens College, University of New York.

Bellair, P. E., & Kowalski, B. R. (2015). Low-Skill Employment Opportunity and African American–White Difference in Recidivism. *Journal of Research in Crime and Delinquency*, *48*(2), 176–208. https://doi.org/10.1177/0022427810391536

Berg, M. T., & Rengifo, A. F. (2009). Rethinking Community Organization and Robbery: Considering Illicit Market Dynamics. *Justice Quarterly*, *26*(2), 211–237. https://doi.org/10.1080/07418820802249096

Blattman, C. (2015). *Can Employment Reduce Lawlessness and Rebellion? A Field Experiment with High Risk Men in a Fragile State*. *National Bureau of Economic Research*. Cambridge. https://doi.org/10.1017/CBO9781107415324.004

Boggess, L. N., & Hipp, J. R. (2014). The Spatial Dimensions of Gentrification and the Consequences for Neighborhood Crime. *Justice Quarterly*, (November), 31. https://doi.org/10.1080/07418825.2014.943799

Braveman, P, Gruskin, S. (2003). Defining Equity in Health. *Journal of Epidemiology & Community Health*, *57*, 254–258.

Brock, K. (n.d.). IMPLEMENTING A SUSTAINABLE LIVELIHOODS FRAMEWORK FOR POLICY-DIRECTED RESEARCH : REFLECTIONS FROM PRACTICE IN MALI WORKING PAPER 90.

Bronfenbrenner, U. (1994). Ecological models of human development. *Readings on the Development of Children*.

Burgess, E. W. (1967). The growth of the city. *The City*, 47–62. https://doi.org/10.2307/3004850

Campanella, R. (2006). *Geographies of New Orleans: Urban Fabrics before the Storm*. New Orleans: Center for Louisiana Studies. Retrieved from http://www.richcampanella.com/assets/pdf/Campanella_Geographies of New Orleans_Part0_Introduction and Timeline.pdf

Carpenter, A., Leone De Nie, K., Montoya, N., Mahoney, K., & Greene, T. (2010). *Optimizing Blight Strategies Deploying Limited Resources in Different Neighborhood Housing Markets About the Greater New Orleans Community Data Center*. New Orleans. Retrieved from www.gnocdc.org

Chamberlain, A. W. (2012). *Interrelationship between Neighborhood Ecology and Prisoner Reintegration*. University of California, Irvine.

Chamberlain, A. W., Boggess, L. N., & Powers, R. A. (2014). Journal of Crime and Justice The impact of the spatial mismatch between parolee and employment locations on recidivism. *Journal of Crime and Justice*, 1–23. https://doi.org/10.1080/0735648X.2014.965264

Chamberlain, A. W., & Wallace, D. (2015). Mass Reentry, Neighborhood Context and Recidivism: Examining How the Distribution of Parolees Within and Across Neighborhoods Impacts Recidivism. *Justice Quarterly*, 1–32. https://doi.org/10.1080/07418825.2015.1012095

Chauhan, P., Reppucci, N. D., & Turkheimer, E. N. (2009). Racial differences in the associations of neighborhood disadvantage, exposure to violence, and criminal recidivism among female juvenile offenders. *Behavioral Sciences & the Law*, *27*(4), 531–52. https://doi.org/10.1002/bsl.868

Claggion, J. S. (2008). *Understanding recidivism rates in Washington DC: Assessing individual and neighborhood level determinants of criminality among African-American Male Ex-Offenders . Dissertation Abstracts International Section A: Humanities and Social Sciences*. Howard University. Retrieved from http://ezp-prod1.hul.harvard.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2008-99170-503&site=ehost-live&scope=site

Clear, T., Rose, D., Waring, E., & Scully, K. (2003). Coercive Mobility and Crime: A Preliminary Examination of Concentrated Incarceration and Social Disorganization. *Justice Quarterly*, *20*(1), 33–64.

Cobbina, J. E. (2010). Reintegration Success and Failure: Factors Impacting Reintegration Among Incarcerated and Formerly Incarcerated Women. *Journal of Offender Rehabilitation*, *49*(3), 210–232. https://doi.org/10.1080/10509671003666602

Collinson, S., Elhawary, S., & Muggah, R. (2010). States of fragility: Stabilisation and its implications for humanitarian action. *Disasters*, *34*(SUPPL. 3), 275–296. https://doi.org/10.1111/j.1467-7717.2010.01206.x

Committee, A. (n.d.). SUSTAINABLE LIVELIHOODS GUIDANCE SHEETS FRAMEWORK INTRODUCTION VULNERABILITY TRANSFORMING. *Context*.

Committee, I., & Cross, R. (2007). *International humanitarian law and the challenges of contemporary armed conflicts. International Review of the Red Cross* (Vol. 89). Geneva. https://doi.org/10.1017/S1816383107001294

Condron, D. (2009). Social Class, School and Non-School Environments, and Black/White Inequalities in Children's Learning. *American Sociological Review*, *74*(October), 683–708.

Davis, D. (2012). *Urban Resilience in Situations of Chronic Violence: Book*. Retrieved from http://web.mit.edu/cis/urbanresiliencereport2012.pdf

Davis, G. M. (2014). *EXPLORING THE EFFECTS OF EX-PRISONER REENTRY ON STRUCTURAL FACTORS IN DISORGANIZED COMMUNITIES: IMPLICATIONS FOR LEADERSHIP PRACTICE*. Antioch University.

Dean, C. W., & Piquero, A. R. (1996). CRIMINAL PROPENSITIES, DISCRETE

GROUPS OF OFFENDERS, AND PERSISTENCE IN CRIME*. *CRIMINOLOGY*, *34*(4), 547–574.

Decker, S., & Pyrooz, D. (2011). Journal of Strategic Security. *Journal of Strategic Security*, *4*(4), 151–166. Retrieved from http://scholarcommons.usf.edu/jss

Dickson, S. R., Polaschek, D. L. L., & Casey, A. R. (2013). Can the quality of high-risk violent prisoners' release plans predict recidivism following intensive rehabilitation? A comparison with risk assessment instruments. *Psychology, Crime & Law*, *19*(4), 371–389. https://doi.org/10.1080/1068316X.2011.640634

Distefano, C., Zhu, M., & Mîndrilă, D. (2009). Understanding and using factor scores: Considerations for the applied researcher. *Practical Assessment, Research & Evaluation*, *14*(20), 1–11.

Elo, I. T., Mykyta, L., Margolis, R., & Culhane, J. F. (2010). Perceptions of Neighborhood Disorder: The Role of Individual and Neighborhood Characteristics. *National Institutes of Health, NIH Public Access*, *90*(5), 1–21. https://doi.org/10.1111/j.1540-6237.2009.00657.x.Perceptions

Fenton, W., Kent, R., Luu, K., Programme, H. F., Resilience, D., & Academy, L. (n.d.). ALNAP STUDY: Leadership in Action.

Food and Agriculture Organization of the United Nations, Rome and International Labour Organization, G. (2007). The Livelihood Assessment Tool-kit Analysing and responding to the impact of disasters on the livelihoods of people. *October*. Retrieved from http://ler.itcilo.org/ler-roll-out-in-south-kivu-drc/livelihood-assessment-toolkit-and-ler-guides-in-french/livelihood-assessment-toolkit-english-1

Geller, A., Garfinkel, I., & Western, B. (2006). The Effects of Incarceration on Employment and Wages An Analysis of the Fragile Families Survey. *Center for Research on Child Wellbeing Working Paper*, *01-FF*(August), 1–35.

Godesso, A. (2008). A thesis submitted to the School of Graduate Studies of Addis Ababa University in partial fulfillment of the requirements for the Degree of Master of Arts in Sociology. In *Control*.

Gorman, D. M., Speer, P. W., Gruenewald, P. J., & Labouvie, E. W. (2001). Spatial dynamics of alcohol availability, neighborhood structure and violent crime. *Journal of Studies on Alcohol*, *62*, 628–636.

Grunwald, H. E., Lockwood, B., Harris, P. W., & Mennis, J. (2010). Influences of neighborhood context, individual history and parenting behavior on recidivism among juvenile offenders. *Journal of Youth and Adolescence*, *39*(9), 1067–1079. https://doi.org/10.1007/s10964-010-9518-5

Grunwald, H., Harris, P., Mennis, J., Obradovic, Z., Izenman, A., & Lockwood, B. (2007). Predicting Recidivism: Analyzing the Effects of Individual, Program and Neighborhoods with Cross-Classified Hierarchical Generalized Linear Modeling. In *Conference Papers -- American Society of Criminology* (pp. 1–8). Retrieved from

http://0-search.ebscohost.com.maurice.bgsu.edu/login.aspx?direct=true&db=sih&AN=34676827&login.asp&site=ehost-live&scope=site

Gutierrez, L., Wilson, H. A., Rugge, T., & Bonta, J. (2013). The Prediction of Recidivism with Aboriginal Offenders: A Theoretically Informed Meta-Analysis1. *Canadian Journal of Criminology and Criminal Justice/La Revue Canadienne de Criminologie et de Justice Pénale*, *55*(1), 55–99. https://doi.org/10.3138/cjccj.2011.E.51

Hipp, J. R., Petersilia, J., & Turner, S. (2010). Parolee Recidivism In California: The Effect Of Neighborhood Context And Social Service Agency Characteristics. *Criminology*, *48*(4), 947–979. https://doi.org/10.1111/j.1745-9125.2010.00209.x

Horgan, J., & Braddock, K. (2010). Rehabilitating the Terrorists?: Challenges in Assessing the Effectiveness of De-radicalization Programs. *Terrorism and Political Violence*, *22*(2), 267–291. https://doi.org/10.1080/09546551003594748

ISS-ICRC. (2012). *Urban violence and humanitarian challenges: Joint Report*. *Urban violence and humanitarian challenges*. Geneva. https://doi.org/10.2815/28829

James, N. (2015). Offender Reentry: Correctional Statistics, Reintegration into the Community, and Recidivism Analyst in Crime Policy.

Justice, M. of. (2009). *Theories of the Causes of Crime*.

Kijewski-Correa, T., & Taflanidis, A. a. (2011). The Haitian housing dilemma: can sustainability and hazard-resilience be achieved? *Bulletin of Earthquake Engineering*, *10*(3), 765–771. https://doi.org/10.1007/s10518-011-9330-y

Kirk, D. S. (2009). A Natural Experiment on Residential Change and Recidivism: Lessons from Hurricane Katrina. *American Sociological Review*, *Vol 74*(June), 484–505.

Kirk, D. S. (2012). Residential change as a turning point in the life course of crime: Desistance or temporary cessation? *Criminology*, *50*(2), 329–358. https://doi.org/10.1111/j.1745-9125.2011.00262.x

Kubrin, C. E. (2005). Gangstas, Thugs, and Hustlas: Identity and the Code of the Street in Rap Music. *Social Problems*, *52*(3), 360–378. https://doi.org/10.1525/sp.2005.52.3.360

Kubrin, C. E., & Stewart, E. a. (2006). Predicting who reoffends: The neglected role of neighborhood context in recidivism studies. *Criminology*, *44*(1), 165–197. https://doi.org/10.1111/j.1745-9125.2006.00046.x

Kubrin, C. E., & Weitzer, R. (n.d.). NEW DIRECTIONS IN SOCIAL DISORGANIZATION THEORY. https://doi.org/10.1177/0022427803256238

Lamb, R. D. (2010). *Microdynamics of illegitimacy and complex urban violence in Medellin, Colombia*. *ProQuest Dissertations and Theses*. Univerity of Maryland. Retrieved from http://ezproxy.nottingham.ac.uk/login??url=http://search.proquest.com/docview/733

012990?accountid=8018\nhttp://sfx.nottingham.ac.uk/sfx_local/?url_ver=Z39.88-
2004&rft_val_fmt=info:ofi/fmt:kev:mtx:dissertation&genre=dissertations+&+theses
&sid=ProQ:ProQuest

Langes, L. E. C. (2012). *Resiliency in Urban Youth with Disruptive Behavior Disorders Exposed to Chronic Community Violence: A Profile Analysis*. *ProQuest Dissertations and Theses*. Chicago School of Professional Psychology. Retrieved from http://search.proquest.com/docview/1022032107?accountid=14553\nhttp://openurl.library.uiuc.edu/sfxlcl3?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:dissertation&genre=dissertations+&+theses&sid=ProQ:ProQuest+Dissertations+&+Theses+Full+Text&atitle

Martinez, D. J. (2010). Role accumulation theory and prisoner reintegration The pursuit of transformative social roles..pdf. *The Journal of Community and Criminal Justice*, *57*(2), 139–151. https://doi.org/10.1177/0264550510362560

Mason, T. D. (2010). *THE EFFECT OF ECOLOGICAL SUSTAINABILITY ON INTERSTATE AND INTRASTATE*. University of North Texas.

Massey, D. S. (1990). American Apartheid: Segregation and the Making of the Underclass'. *American Journal of Sociology*, *96*(2), 329–357.

Menezes-Filho, N., & Vasconcellos, L. (2004). " Operationalising Pro-Poor Growth " A joint initiative of AFD, BMZ (GTZ, KfW Development Bank), DFID, and the World Bank A Country Case Study on Brazil.

Merlo, J. (2003). Multilevel analytical approaches in social epidemiology: measures of health variation compared with traditional measures of association. *Journal of Epidemiology and Community Health*, *57*(8), 550–552. https://doi.org/10.1136/jech.57.8.550

Merlo, J. (2005). A brief conceptual tutorial of multilevel analysis in social epidemiology: linking the statistical concept of clustering to the idea of contextual phenomenon. *Journal of Epidemiology & Community Health*, *59*(6), 443–449. https://doi.org/10.1136/jech.2004.023473

Merlo, J. (2006). A brief conceptual tutorial of multilevel analysis in social epidemiology: using measures of clustering in multilevel logistic regression to investigate contextual phenomena. *Journal of Epidemiology & Community Health*, *60*(4), 290–297. https://doi.org/10.1136/jech.2004.029454

Messer, L. C., Laraia, B. A., Kaufman, J. S., Eyster, J., Holzman, C., Culhane, J., … O'Campo, P. (2006). The development of a standardized neighborhood deprivation index. *Journal of Urban Health*, *83*(6), 1041–1062. https://doi.org/10.1007/s11524-006-9094-x

Miller, J., Copeland, K., & Sullivan, M. (2015). Keeping Them Off the Corner: How Probation Officers Steer Offenders Away From Crime Opportunities. *The Prison*

Journal, *95*(2), 178–198. https://doi.org/10.1177/0032885515575263

Milliken, J., & Krause, K. (2002). Making states work: State failure and the crisis of governance. *Development and Change*, *33*(5), 753–774. Retrieved from https://books.google.co.uk/books?hl=en&lr=&id=V7EibJ74C-UC&oi=fnd&pg=PR8&dq=making+states+work&ots=nib-W09VYd&sig=EwUpPtXw6xAG8vBm4vvCmKnCWV8

Mitchell, O., Wilson, D. B., Eggers, A., & MacKenzie, D. L. (2012). Assessing the effectiveness of drug courts on recidivism: A meta-analytic review of traditional and non-traditional drug courts. *Journal of Criminal Justice*, *40*(1), 60–71. https://doi.org/10.1016/j.jcrimjus.2011.11.009

Mooney, J. L., & Daffern, M. (2014). The relationship between aggressive behaviour in prison and violent offending following release. *Psychology, Crime & Law*, *21*(4), 314–329. https://doi.org/10.1080/1068316X.2014.989163

Morenoff, J. D., & Harding, D. J. (2014). Incarceration, Prisoner Reentry, and Communities. *Annual Review of Sociology*, *40*, 411–429. https://doi.org/10.1146/annurev-soc-071811-145511

Morenoff, J. D., Sampson, R. J., & Raudenbush, S. W. (2001). Neighborhood Inequality, Collective Efficacy, and the Spacial Dynamics of Urban Violence. *Criminology*, *39*(3), 517–559. https://doi.org/10.1111/j.1745-9125.2001.tb00932.x

Moser, C. O. N., & McIlwaine, C. (2006). Latin American urban violence as a development concern: Towards a framework for violence reduction. *World Development*, *34*(1), 89–112. https://doi.org/10.1016/j.worlddev.2005.07.012

Muggah, R. (2010). *The effects of stabilisation on humanitarian action in Haiti*. *Disasters* (Vol. 34). https://doi.org/10.1111/j.1467-7717.2010.01205.x

Muggah, R. (2012). Researching the Urban Dilemma: Urbanization, Poverty and Violence. *Ottawa: Centro Internacional de Investigaciones Para ...*, 1–118. Retrieved from http://www.iadb.org/intal/intalcdi/PE/2012/12203.pdf

Muggah, R. (2013). Stabilization Operations, Security and Development. In *Ending Wars, Consolidating Peace: Economic Perspective* (pp. 33–52). London: Adelphi Papers. https://doi.org/10.4324/9780203641514

Muggah, R. (2014). Deconstructing the fragile city: exploring insecurity, violence and resilience. *Environment and Urbanization*, *26*(2), 345–358. https://doi.org/10.1177/0956247814533627

Muggah, R. (2015). The Invisible Displaced: A Unified Conceptualization of Population Displacement in Brazil. *Journal of Refugee Studies*, (December), feu033–. https://doi.org/10.1093/jrs/feu033

Muggah, R., & O'Donnell, C. (2015). Next Generation Disarmament , Demobilization and Reintegration. *International Journal of Security and Development*, *4*(30), 1–12. https://doi.org/10.5334/sta.fs

Nally, J. M., Lockwood, S., Ho, T., & Knutson, K. (2014). Post-Release Recidivism and Employment among Different Types of Released Offenders: A 5-Year follow-up Study in the United States. *International Journal of Criminal Justice Sciences*, *9*(1), 16–34. Retrieved from http://search.proquest.com.ezp-prod1.hul.harvard.edu/docview/1557153003?accountid=11311\nhttp://sfx.hul.harvard.edu/hvd?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&genre=article&sid=ProQ:ProQ:criminaljusticeperiodicalsshell&atitle=Post-Re

Nasser Pendatun Lidasan, by B., Karp Directj, R., & Sphulman ember Thomas Chapm, -Petfefc M. (1990). THE COMPLEXITY OF ARMED CONFLICT IN MINDANAO: BEYOND ECONOMIC DEPRIVATION, DISCRIMINATION, AND INEQUALITY.

Nations, U., & Settlements, H. (2011). United Nations Human Settlements Programme, Planning Sustainable Cities: Global Report on Human Settlements 2009 (UN HABITAT and Earthscan), 2009. *Environment and Urbanization Asia*, *2*(1), 149–149. https://doi.org/10.1177/097542531000200111

Ostermann, M. (2015). How do Former Inmates Perform in the Community? A Survival Analysis of Rearrests, Reconvictions, and Technical Parole Violations. *Crime & Delinquency*, *61*(2), 163–187. https://doi.org/10.1177/0011128710396425

Ousey, G. C., & Kubrin, C. E. (2009). Exploring the Connection between Immigration and Violent Crime Rates in U . S . Cities, 1980 – 2000. *Social Problems*, *56*(3), 447–473. https://doi.org/10.1525/sp.2009.56.3.447.448

Pager, D. (2008). Study: Black man and white felon, same chances for hire. *CNN's Black in America*. Retrieved from http://www.blackamericaweb.com/?q=articles/news/baw_commentary_news/37405

Parker, K. (2000). Poverty, Poverty Concentration and Homicide. *Social Science*, *81*(2), 555–570.

Paynich, R., & Hill, B. (2010). Social Disorganization and Social Efficacy. In *Fundamentals of Crime Mapping: principles and practice* (pp. 53–96).

Peres, M., Almeida, J., Ruotti, C., & Nery, M. (2012). Homicide fall in Sao Paulo municipality, Brazil: the role of public security indicators. *Injury Prevention*, *18*(Supplement 1), A144–A144. https://doi.org/10.1136/injuryprev-2012-040590j.12

Phelps, M. (2013). The paradox of probation: Community supervision in the age of mass incarceration. *Law & Policy*, *35*(1-2), 51–80. https://doi.org/10.1111/lapo.12002

Pryor, M. (2010). The unintended effects of prisoner reentry policy and the marginalization of urban communities. *Dialectical Anthropology*, *34*(4), 513–517. https://doi.org/10.1007/s10624-010-9207-5

Purcell, M. C. (2007). *Surviving inner-city war zones: Trauma and resiliency among urban youth exposed to community violence. Dissertation Abstracts International:*

Section B: The Sciences and Engineering.

Ribetti, M. (2002). *SOME CONFLICTS MAY NOT END: THE STABILITY OF PROTRACTED VIOLENCE IN COLOMBIA*. University of Texas at Austin.

Sampson, R. J., & Graif, C. (2009). Neighborhood Social Capital as Differential Social Organization. Resident and Leadership Dimensions. *American Behavioral Scientist*, *52*(11), 1579–1605. https://doi.org/10.1177/0002764209331527

Sampson, R. J., & Laub, J. H. (2005). A life-course view of the development of crime. *The Annals of the American Academy of Political and Social Science*, *602*(1), 12–45. https://doi.org/10.1177/0002716205280075

Sampson, R. J., Morenoff, J. D., & Gannon-Rowley, T. (2002). ASSESSING " NEIGHBORHOOD EFFECTS " : Social Processes and New Directions in Research. *Annu. Rev. Sociol*, *28*, 443–78. https://doi.org/10.1146/annurev.soc.28.110601.141114

Sampson, R. J., Morenoff, J. D., & Raudenbush, S. (2005). SocialaAnatomy of racial and ethnic disparities in violence. *American Journal of Public Health*, *95*(2), 224–232. https://doi.org/10.2105/AJPH.2004.037705

Sampson, R. J., & Raudenbush, S. W. (1999). Systematic Social Observation of Public Spaces: A New Look at Disorder in Urban Neighborhoods. *American Journal of Sociology*, *105*(3), 603–651. https://doi.org/10.1086/210356

Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: a multilevel study of collective efficacy. *Science (New York, N.Y.)*, *277*(5328), 918–924. https://doi.org/10.1126/science.277.5328.918

Sampson, R. J., Sharkey, P., & Raudenbush, S. W. (2008). Durable effects of concentrated disadvantage on verbal ability among African-American children. *Proceedings of the National Academy of Sciences of the United States of America*, *105*(3), 845–852. https://doi.org/10.1073/pnas.0710189104

Sepulveda, L., & Syrett, S. (2007). Out of the shadows? Formalisation approaches to informal economic activity. *Policy & Politics*, *35*(1), 87–104. https://doi.org/10.1332/030557307779657739

Sevigny, E. L., Fuleihan, B. K., & Ferdik, F. V. (2013). Do drug courts reduce the use of incarceration?: A meta-analysis. *Journal of Criminal Justice*, *41*(6), 416–425. https://doi.org/10.1016/j.jcrimjus.2013.06.005

Shah, B. (1988). THE CITY IN CHANGE: Socio-spatial dimensions of urban environmental change. *Biresh Shah*.

SHAW, & McCAY. (1942). *Juvenile Deliquency and Urban Areas*. Chicago: University of Chicago Press.

Sherman, L. W., Heather Strang, B., Evan Mayo-Wilson, B., Daniel Woods, B. J., Barak Ariel, B., Sherman Á H Strang, L. W., … Ariel, B. (2015). Are Restorative Justice Conferences Effective in Reducing Repeat Offending? Findings from a Campbell

Systematic Review Conclusion RJCs are a cost-effective means of reducing frequency of recidivism. *J Quant Criminol*, *31*, 1–24. https://doi.org/10.1007/s10940-014-9222-9

Speer, P. W., Gorman, D. M., Labouvie, E. W., & Ontkush, M. J. (1998). Violent Crime and Alcohol Availability: Relationships in an Urban Community. *Source Journal of Public Health Policy*, *1981101*(3), 303–318. Retrieved from http://www.jstor.org

Stahler, G., Mennis, J., Belenko, S., Welsh, W., Hiller, M., & Zajac, G. (2013). Predicting recidivism for released state prison offenders: Examining the influence of individual and neighborhood characteristics and spacial contagion on the likelihood of reincarceration. *Criminal Justice and Behavior*, *40*(6), 690–711.

Steinmetz, K. F., & Henderson, H. (2015). On the Precipice of Intersectionality: The Influence of Race, Gender, and Offense Severity Interactions on Probation Outcomes. *Criminal Justice Review*, 1–17. https://doi.org/10.1177/0734016815577194

Stern, J. (2010). *Deradicalization or Disengagement? Future Challenges in National Security and Law*. https://doi.org/10.1097/01.AOG.0000443274.83522.9a

Sutherland, E. H. (1947). *Principles of criminology* (4th ed.). Chicago: Chicago, J. B. Lippincott Co.

Swartz, C. (2010). *Offender recidivism and neighborhood environments*. *ProQuest Dissertations and Theses*. City University of New York.

ten Bensel, T., Gibbs, B., & Lytle, R. (2014). A Propensity Score Approach towards Assessing Neighborhood Risk of Parole Revocation. *American Journal of Criminal Justice*, *40*(2), 377–398. https://doi.org/10.1007/s12103-014-9269-z

Theall, K. P., Scribner, R., Cohen, D., Bluthenthal, R. N., Schonlau, M., Lynch, S., & Farley, T. A. (2009). The neighborhood alcohol environment and alcohol-related morbidity. *Alcohol and Alcoholism*, *44*(5), 491–499. https://doi.org/10.1093/alcalc/agp042

Theall, K. P., Scribner, R., Ghosh-Dastidar, B., Cohen, D., Mason, K., & Simonsen, N. (2009). Neighbourhood alcohol availability and gonorrhea rates: impact of social capital. *Geospat Health*, *3*(2), 241–255. https://doi.org/10.4081/gh.2009.224

Thomas, J. C., & Torrone, E. (2006). Incarceration as Forced Migration: Effects on Selected Community Health Outcomes. *American Journal of Public Health J Public Health*, *9696*(10), 1762–1765. https://doi.org/10.2105/AJPH.2005.081760

Tillyer, M. S., & Vose, B. (2011). Social ecology, individual risk, and recidivism: A multilevel examination of main and moderating influences. *Journal of Criminal Justice*, *39*(5), 452–459. https://doi.org/10.1016/j.jcrimjus.2011.08.003

Townsend, P. (1979). Poverty in the United Kingdom A Survey of Household Resources and Standards of Living.

Uchida, C. D., Swatt, M. L., Solomon, S. E., & Varano, S. (2014). *U.S. Department of*

Justice: Neighborhoods and Crime: Collective Efficacy and Social Cohesion in Miami-Dade County.

UNODC. (2013). *Global Study on Homicide 2013*. *Unodoc*. https://doi.org/10.1016/j.jcv.2011.08.025

Vilalta, C., & Muggah, R. (2014). Violent disorder in Ciudad Juarez: a spatial analysis of homicide. *Trends in Organized Crime*, *17*(3), 161–180. https://doi.org/10.1007/s12117-014-9213-0

Vyas, S., & Kumaranayake, L. (2006). Constructing socio-economic status indices: how to use principal components analysis. *Health Policy and Planning*, *21*(6), 459–68. https://doi.org/10.1093/heapol/czl029

Walker, B., Carpenter, S., Anderies, J., Abel, N., Cumming, G., Janssen, M., … Pritchard, R. (2002). Resilience Management in Social-ecological Systems : a Working Hypothesis for a Participatory Approach, *6*(1).

Wallace, D. (2015). Do Neighborhood Organizational Resources Impact Recidivism? *Sociological Inquiry*, *85*(2), 285–308. https://doi.org/10.1111/soin.12072

Webster, C., MacDonald, R., & Simpson, M. (2006). Predicting Criminality? Risk Factors, Neighbourhood Influence and Desistance. *Youth Justice*, *6*(1), 7–22. https://doi.org/10.1177/1473225406063449

Wilkinson, D. (2001). Violent events and social identity: Specifying the relationship between respect and masculinity in inner-city youth violence. In *Sociological Studies of Children and Youth (Sociological Studies of Children and Youth, Volume 8)* (Kinney, D, pp. 235–269). Emerald Group Publishing Limited.

Williams, N. E. (2009). *LIVING WITH CONFLICT: THE EFFECT OF COMMUNITY ORGANIZATIONS, ECONOMIC ASSETS, AND MASS MEDIA CONSUMPTION ON MIGRATION DURING ARMED CONFLICT*. University of Michigan.

Wilson, W. J. (2011). When Work Disappears. *Political Science Quarterly*, *111*(4), 567–595. https://doi.org/10.2307/2152085

Yu, Q., Scribner, R., Carlin, B., Theall, K., Simonsen, N., Ghosh-Dastidar, B., … Mason, K. (2008). Multilevel spatio-temporal dual changepoint models for relating alcohol outlet destruction and changes in neighbourhood rates of assaultive violence. *Geospat Health*, *2*(2), 161–172. https://doi.org/10.4081/gh.2008.240

Zhu, L., Gorman, D. M., & Horel, S. (2006). Hierarchical Bayesian spatial models for alcohol availability, drug "hot spots" and violent crime. *Int J Health Geogr*, *5*, 54. https://doi.org/10.1186/1476-072x-5-54