

Article

Relative Difference and Burglary Location: Can Ecological Characteristics of a Burglar's Home Neighborhood Predict Offense Location?

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#### **Abstract**

Objectives: Neighborhood characteristics predict burglary targets, but target attractiveness may be colored by the conditions in which a potential offender resides. We test whether relative differences in concentrated disadvantage, racial/ethnic composition, and ethnic heterogeneity influence where burglars offend, controlling for distance. From a relative deprivation perspective, economically advantaged areas make more attractive targets to burglars residing in disadvantage neighborhoods, but a social disorganization perspective predicts areas lower in social cohesion are most attractive, which may be neighborhoods with greater disadvantage. Methods: Drawing upon a unique sample of cleared burglaries in the City of Tampa, Florida

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from 2000 to 2012, we utilize discrete choice modeling to predict burglar offense destination. Results: Offenders target neighborhoods that are geographically proximate or ecologically similar to their own. When accounting for relative differences, burglars from all neighborhood types are more likely to target highly disadvantaged or heterogeneous neighborhoods. Conclusions: Burglars generally select targets that are similar to their residence. However, when suspects do discriminate, there is evidence that they target neighborhoods that are worse off relative to their own on characteristics such as residential instability, disadvantage, racial composition, and racial/ethnic diversity. These neighborhoods are associated with lower social control and lower risk of detection.

## **Keywords**

burglary, neighborhoods and crime, journey to crime, discrete choice, relative deprivation

## Introduction

Explaining the geographic distribution of crime and criminals is a central question in criminological research. One way to explain some of the macrolevel differences in the spatial patterning of crime is by examining offense patterns. The geography of offense patterns is usually explained with one of the two ways. One perspective examines the origin of crime: where an offender lives and the corresponding characteristics of the offender's neighborhood (e.g., Bernasco 2010b; Wheeler 2012). Another approach focuses instead on the destination of crime: where an offender commits crime and the characteristics of those neighborhoods (e.g., Bernasco and Block 2009; Bernasco and Luykx 2003). However, little research has considered how these two perspectives interact: the neighborhood where an offender lives likely serves as an important reference point that both constrains and guides an appropriate offense destination.

Target attractiveness is likely colored by the characteristics of the target neighborhood relative to the offender's home neighborhood. For example, relative deprivation theory posits that perceived inequality motivates criminal behavior. Under this perspective, neighborhoods with greater resources may be particularly attractive to burglars who reside in impoverished communities. Conversely, offenders may choose to burgle in neighborhoods with greater levels of disadvantage than their own neighborhood, since such

neighborhoods may have a reduced capacity to exert informal social control or identify outsiders as potential offenders. Thus, a key to understanding patterns of offending across neighborhoods is to examine the relative differences between an offender's home neighborhood and the target neighborhood. The necessity to do so has been reiterated in extant journey to crime literature, as Wheeler (2012:590) concludes that "One of the most consistent findings ... is that the short distance between the home location and the offense location is taken to be evidence the *home location has a strong effect on where an offender will choose to commit their crime*" (emphasis added).

An offender's home neighborhood is typically used to assess how far an offender might travel to commit a crime. Research has established that geographic distance is the most consistent predictor of offense destination and that offenders generally target areas that are within a relatively short distance from their homes (e.g., Bernasco and Block 2009; Rossmo 2000). This signifies the importance of geography in determining offense location: An offender's home neighborhood and the surrounding neighborhoods are geographically fixed, constraining an individual offender's options for crime commission. These geographic constraints essentially limit the role that individual factors may play in determining crime locations, as geography and travel distance take primacy. Consequently, it is the *characteristics* of neighborhoods that are more consequential for influencing the distribution of crime across neighborhoods (Vandeviver, Van Daele, and Vander Beken 2015). However, beyond distance, it is less clear what role the ecological conditions of the offenders' home neighborhoods have in influencing target decisions.

The current study examines the relative differences between where offenders live and where they choose to offend above and beyond the effect of distance. We assess how the characteristics of an offender's neighborhood may condition the attractiveness of another neighborhood for burglary. We seek to understand how the socioeconomic and demographic characteristics of an offender's home neighborhood relative to each potential target neighborhood (i.e., all other neighborhoods in the city) might influence which neighborhoods are ultimately selected for crime. We utilize discrete choice modeling on all arrests for burglaries in the City of Tampa, Florida, from January 2000 through September 2012. By using data that capture address information for both the offender's home neighborhood and the target neighborhood, we can examine the differences between these neighborhoods to gain insight into how burglars' offense patterns influence the variation in burglary rates across neighborhoods.

## Literature Review

Much research examining offense patterns focuses on the role of distance in target selection. A substantial body of work within the journey to crime literature has found evidence of a distance decay strategy: the likelihood that a location will be selected decreases as the distance to the target increases (e.g., Barker 2000; Rengert, Piquero, and Jones 1999). In general, offenders tend to commit crimes close to home out of convenience since traveling to different areas entails risks and increased effort, while offending closer to home minimizes both. However, more attractive targets may "pull" offenders further distances (Bernasco and Luykx 2003; Snook 2004; Vandeviver et al. 2015) since the payoff is greater (Morselli and Royer 2008). Although prior research has not definitively determined what makes one target more attractive relative to another, neighborhood factors related to target accessibility and relative attractiveness are essential considerations when considering the geography of crime.

# **Ecological Factors and Target Attractiveness**

Awareness of a particular criminal opportunity is a key to understanding target attractiveness: would-be offenders become aware of potential targets as they engage in their routine activities. Routine activities theory (Cohen and Felson 1979) asserts that target attractiveness is conditioned upon the presence of a motivated offender who encounters a suitable target in the absence of a capable guardian. The intersection in time and space of these three components likely occurs as offenders move about the city as part of their routine activities.

However, an important consideration in the routine activities perspective is the constraints placed on movements that limit potential offenders' awareness of attractive targets. Targets are more likely to be identified near one's home since for most people, but *especially* for residents of highly disadvantaged neighborhoods, one's routine activities take place close to home (Krivo et al. 2013). This limits an offender's activity space to familiar places, such as home, school, shopping areas, or work that are often located within their home neighborhood or the ones nearby (Brantingham and Brantingham 1993). As such, offenders may only be aware of a small proportion of the overall targets in a larger area (Brantingham and Brantingham 1993, 2008), and this limits the types of neighborhoods that offenders are most likely to burgle, since characteristics such as race, disadvantage, and economic resources largely cluster

across neighborhoods. Indeed, the journey to crime research has consistently demonstrated that offenders do not travel far to commit crime (e.g., Rossmo 2000; Townsley et al. 2015). This suggests that attractive targets are generally limited to those located nearby, although this distance may be greater for property offenses relative to violent offenses (Barker 2000; Rossmo 2000). The distance to crime for burglary in particular typically ranges between 1 and 2 miles (Bernasco 2006; Gabor and Gottheil 1984; Snook 2004).

Nearby neighborhoods are likely also the ones with which potential offenders are most familiar. Ethnographic research has found that offenders favor familiar neighborhoods since the would-be offender blends in more easily (Brown and Altman 1983; Rengert and Wasilchick 1985) and well-known neighborhoods require less planning and time than offending in unfamiliar areas. Research has shown that burglars are calculating and plan their crime in advance based on knowledge of the area and people or property involved (e.g., Cromwell, Olson, and Avary 1991; Wright and Decker 1994), although the execution of that plan may occur because the opportunity to do so becomes available (Cromwell, Olson, and Avary 1991).

Certain neighborhood characteristics can augment target attractiveness. Neighborhoods characterized by high levels of disadvantage may be particularly attractive targets since these areas often have more crime generally due to weaker conventional institutions of social control (Sampson and Groves 1989). An important impediment to crime is social cohesion, or the ability of residents to come together to address problems in the neighborhood, including crime (Sampson, Raudenbush, and Earls 1997). Disadvantaged neighborhoods, however, typically lack social cohesion. This is because poverty, residential instability, and racial ethnic heterogeneity—characteristics that typify disadvantaged neighborhoods—undermine social cohesion by disrupting social networks and reducing collective efficacy that prevent crime (Bellair 1997; Sampson and Groves 1989; Sampson et al. 1997).

Prior research has found that the presence of social cohesion in a neighborhood can deter crime. Indeed, Bernasco and Block (2009) found that robbers were less likely to commit crimes in neighborhoods with higher levels of collective efficacy (although this finding was small and only marginally significant). Conversely, disadvantaged neighborhoods characterized by factors indicative of lower social cohesion may be more likely to be targeted. Higher rates of burglary have been associated with residentially unstable (e.g., Bernasco, Johnson, and Ruiter 2015),

ethnically heterogeneous (Bernasco and Luykx 2003; Bernasco and Nieuwbeerta 2005), and socioeconomically diverse (Johnson and Summers 2015) neighborhoods. These factors in particular make disadvantaged neighborhoods attractive because residential instability and diversity hinder social cohesion and territoriality (Bellair 1997; Brown and Altman 1983). Further, these characteristics promote anonymity among residents, lessening their ability to identify outsiders or potential offenders. Thus, burglars moving goods out of the neighborhood would be less suspicious and the likelihood of apprehension may be minimized. Robbers interviewed in St. Jean's (2007) ethnographic work admitted that they avoided targeting areas where they would be watched by residents who they believed would intervene.

In sum, while proximity to home neighborhood is the most consistent correlate of target location, research has shown that certain characteristics of the target neighborhood attract burglars. Destinations near offenders' homes have a reduced risk associated with travel, and the lack of informal and formal social control in proximate disadvantaged areas may make these areas more attractive destinations for burglary. However, this relies on generalized and universal definitions of disadvantage and attractiveness, although these factors are likely subjective *relative* to individuals' frames of reference. Thus, the desirability of a particular target varies based on an offender's perspective, which is largely shaped by referencing their home neighborhood context.

# Target Neighborhood Characteristics Relative to Home Neighborhood Characteristics

The *degree* to which an opportunity is attractive to an offender is likely influenced by the characteristics of the offender's home neighborhood. Burglars may be more likely to target neighborhoods that are relatively similar to their own home neighborhood. Operating in similarly situated neighborhoods provides burglars with a sense of familiarity and reduces unnecessary risk of detection. This suggests that burglars would discriminate against neighborhoods that are different on certain characteristics. For instance, economic differences between neighborhoods may pose a *social* barrier (Ratcliffe 2003; Reynald et al. 2008). Offenders from impoverished neighborhoods may be unfamiliar with behaviors that are normative in a wealthy neighborhood (Ratcliffe 2003), and this social distance acts as a barrier that potential offenders from disadvantaged neighborhoods cannot overcome—even those who may desire the more lucrative targets. Indeed,

even burglars aware of opportunities in the wealthiest neighborhoods do not prefer those targets (Bernasco and Nieuwbeerta 2005). These social class barriers are complicated by physical distance: geographic segregation imposes a *physical* barrier to offending in neighborhoods that are economically different. Further, given offenders' limited awareness space, potential burglars are most likely aware of opportunities in the nearby and similarly disadvantaged areas (where most burglars reside) than the physically distant wealthier neighborhoods (Farley 1987; White 1990).

Racial/ethnic differences between communities also serve as a social barrier, which might restrain mobility (Rengert 2004; Reynald et al. 2008) and hinder access to racially/ethnically different areas. According to Anderson (2012), Whites avoid what is traditionally considered "Black space" while Blacks often perceive certain settings—schools, White neighborhoods, some businesses—as "White space" and off limits. Indeed, research on the racial composition of the target neighborhood and the individual offender's race/ ethnicity has consistently shown that offenders prefer areas that are racially/ ethnically similar to themselves (Bernasco and Block 2009; Bernasco, Block, and Ruiter 2013; Pettiway 1982; Reynald et al. 2008). However, given that most individuals live in neighborhoods that are racially/ethnically homogenous and similar to their own race/ethnicity (Logan and Stults 2011), individual characteristics such as race/ethnicity may be less consequential for predicting offense location than the characteristics of the neighborhood where they live. This may especially be the case, given geographic segregation by race/ethnicity in most cities. One exception might be heterogeneous neighborhoods. Research has shown that neighborhoods with greater racial ethnic heterogeneity are more susceptible to being targeted by offenders (Bernasco and Luykx 2003; Bernasco and Nieuwbeerta 2005; Vandeviver et al. 2015). Increased diversity may provide anonymity for burglars of varying racial/ ethnic compositions, suggesting that differences in diversity may increase attractiveness rather than decrease. Thus, although there is some evidence to suggest burglars target neighborhoods relatively similar to their own neighborhoods, this may not be universally true.

Factors that attract burglars to different types of neighborhoods are relatively uninvestigated; however, it is likely that an offender's home neighborhood influences the attractiveness of targets in other neighborhoods in two important ways. First, offenders might choose to target neighborhoods that are more economically *advantaged* than their own. A more affluent neighborhood likely has more attractive targets, but the extent to which a target neighborhood is "affluent" may be dependent on the home neighborhood an offender is referencing. Since many offenders reside in

disadvantaged areas, the perception of affluence may be a matter of scale: an offender chooses a more affluent neighborhood relative to his own, but one which is still considered a disadvantaged neighborhood within the city. Further, even potential burglars who reside in impoverished neighborhoods have been exposed to middle-class or more affluent communities and may experience frustrations associated with economic inequality that motivates criminal behavior. Relative deprivation theory (Agnew 1999) posits that perceived inequality results in criminal behavior among individuals. In the case of burglars, an offender may target more affluent areas as a way not only to acquire more valuable goods but also to work out anger toward those living in less deprived areas.

Second, offenders may place greater value on targets located in neighborhoods that are more disadvantaged than their own. Neighborhoods exhibiting higher levels of social disorganization usually have lower levels of social cohesion (Sampson et al. 1997), which is considered an impediment to successful criminality (Bernasco and Nieuwbeerta 2005). Burglars may prefer lower-class neighborhoods generally (Evans 1989) and may be significantly less likely to target affluent areas (Townsley et al. 2015). An offender's perception of social cohesion and informal social control, however, may be conditioned by the presence of these factors in his own neighborhood. Since target selection necessitates finding the optimal balance between risk and reward, burglars may sacrifice the safety associated with nearby targets in order to seek out neighborhoods that are *less* cohesive and where the likelihood of apprehension is lower. For instance, burglars may seek out neighborhoods that have relatively higher rates of residential turnover and heterogeneity compared to their home neighborhood, since these factors reduce residents' sense of territoriality, thereby minimizing detection (Bernasco and Luykx 2003). Some burglars are even willing to risk traveling further to ethnically heterogeneous areas since the risk of apprehension in those neighborhoods may be lower (Vandeviver et al. 2015). While the attractiveness of a criminal opportunity might be contingent upon affluence or social cohesion, the role of an offender's home neighborhood in determining the relative strength of these factors is underexplored.

# **Current Study**

While geographic proximity is the most consistent predictor of offense location, it is not the only factor motivating target selection. Above and beyond distance, we posit that characteristics of the offenders' home

neighborhoods influence their decision where to burgle, particularly characteristics related to disadvantage, social cohesion, and racial/ethnic composition. On one hand, most burglars typically offend in neighborhoods that are qualitatively similar, which suggests that differences in neighborhoods act as social barriers. On the other hand, there are reasons to believe that would-be burglars target locations that are different: more advantaged areas may pull burglars with the potential of a more lucrative payoff, although burglars may be attracted to more impoverished areas which they view as having less social cohesion and a lower likelihood of apprehension. Many extant studies on target selection focus on individual offender characteristics relative to neighborhood condition or target selection (e.g., Van Koppen and Jansen 1998); however, geographic constraints limit individual choice in target decision to proximate areas that are more likely to be qualitatively similar.

Few prior studies have accounted for how the characteristics of an offender's home neighborhood might determine target selection. In one such study, Reynald and colleagues (2008) compared characteristics of origin and destination neighborhoods for over 62,000 crime trips in The Hague between 1996 and 2004. They found that economic and ethnic differences act as social barriers that alter the movements of offenders between neighborhoods. Similarly, Bernasco and Block (2009) found that increased racial/ethnic distance between an offender's home neighborhood and other neighborhoods in Chicago decreased the likelihood of a particular neighborhood being selected for robbery. However, limiting between neighborhood differences in race to any racial/ethnic differences ignores the potential for variability across different types of racial/ethnic neighborhoods. For instance, Black neighborhoods are traditionally associated with a concentration of many disadvantage markers including high unemployment and female-headed households. For a potential burglar, the predominantly Black neighborhood may be more attractive because the greater density of disorganized factors means lower social control and less social cohesion. Although Bernasco and Block (2009) include a measure of collective efficacy, they limit their examination of relative differences to only race and gang activity. We extend Bernasco and Block (2009) by incorporating other aspects of neighborhood structure, including neighborhood disadvantage and residential stability, and assess how differences and relative differences between burglars' home neighborhood and target neighborhood characteristics impact which neighborhoods are ultimately selected for crime.

## **Data and Methods**

### Data

In order to investigate how neighborhood characteristics might influence offense locations, we use data on all arrests for burglaries in the City of Tampa, Florida, from January 2000 through September 2012.<sup>2</sup> We focus exclusively on burglaries because it is a fairly common crime; and given Tampa's efforts to reduce burglary, we are able to get a better accounting of the origin and destination of crime (City of Tampa, FL 2011). There are 7,124 burglary arrests in this time period, which corresponds to 9,288 unique suspects. Although this only represents a fifth of all burglary incidents, Tampa has a higher clearance rates than comparable cities in the United States.<sup>3</sup> The Tampa Police Department provided incident address and date, date of arrest, and home address of the arrested suspect. Incident and home addresses were geocoded using ArcGIS. We exclude cases with unknown or incorrect addresses, P.O. boxes, addresses of correctional facilities, and cases where the suspect resides outside the Tampa city limits. We also eliminated two outliers that occurred more than 20 miles from the suspect's home. The final sample includes 5,182 incidents committed by 6,846 suspects which were aggregated to the census block group, the operational definition of neighborhood.<sup>4</sup> We rely on block groups in order to minimize within neighborhood heterogeneity while also ensuring that there is neighborhood contextual data available.<sup>5</sup> In order to account for the potential impact of neighborhood characteristics on offender decisionmaking, we also include demographic and economic data from the U.S. Census data for each block group. The final data set contains information on all 334 block groups in the City of Tampa.

Dependent variable. In line with prior research examining spatial choice models (Bernasco 2010b; Bernasco and Block 2009; Johnson and Summers 2015; Lammers et al. 2015), our dependent variable is a binary variable indicating the neighborhood the suspect chose to commit a burglary. For each burglary incident, the block group in which a suspect committed a burglary was given a one, and all other neighborhoods in the city (333) were given a 0.

*Independent variables.* In order to assess how neighborhood characteristics might influence a suspect's decision to target a particular neighborhood, we incorporate economic and demographic information using census data from 2000 and 2010. We normalize the 2010 data into 2000 census block group

boundaries and linearly interpolated in order to capture year-specific values.<sup>6</sup> Following prior research (see Browning 2009; Hipp 2011; Sampson and Raudenbush 1999), we use principal components factor analysis to create two indices. First, to measure the impact of poverty, we create an index of concentrated disadvantage comprised of (1) the percentage of residents below poverty, (2) the percentage of unemployed, (3) median income, and (4) median home value where the first two variables loaded positively and the latter two variables loaded negatively; higher values indicate greater disadvantage. Second, we create a residential stability index comprised of (1) average length of residence, (2) the percentage of households that moved into their residence within the last five years, and (3) the percentage of homeowners; higher values indicate greater residential stability. Further, we include a separate measure for single-parent households and racial/ethnic heterogeneity, which may play roles in social cohesion or serve as social barriers. We calculated heterogeneity using the Herfindahl Index (Gibbs and Martin 1962). We also include a measure for percent occupied units, which captures the number of targets in a particular neighborhood. We include the percentage of Black residents and the percentage of Latino residents as indicators of racial/ethnic composition that may act as barriers to offending. Summary statistics are shown in Table 1.

# Methodology

To measure differences in neighborhood structure between the suspect's home neighborhood, targeted neighborhood, and all other neighborhoods, we use discrete choice modeling. In discrete choice models, an individual selects an alternative out of a set of finite options; in this case, the alternatives are the 334 neighborhoods in Tampa and the chosen option is the block group where the suspect burgled. Discrete choice models are based on a utility maximization function in which the decision maker makes a selection that maximizes individual gain (e.g., McFadden 1973). In criminological examples, the potential offender selects a target location that would reap the greatest benefits. Prior research has used discrete choice models to explain individual decisions where to commit burglary (Bernasco 2006; Bernasco and Nieuwbeerta 2005; Townsley et al. 2015), robbery (Bernasco and Block 2009; Bernasco et al. 2013), or theft from vehicles (Johnson and Summers 2015).

Since the alternatives in this study are spatial entities, we also account for distance. In doing so, we assess the differences between the home neighborhood and targeted neighborhood above and beyond the influence

Table 1. Summary Statistics for Variables Used in Analysis.

Predictors	Mean	St. Dev.
Average number of burglaries (per block group)	2.93	2.65
Distance to target neighborhood	2.75	2.69
Distance (mean centered)	0.00	3.40
Distance squared (mean centered)	11.60	23.42
Percentage of Black	25.11	29.17
Percentage of Latino	21.32	18.73
Concentrated disadvantage	0.28	1.01
Residential stability	0.00	0.47
Ethnic heterogeneity	43.55	18.22
Percentage of occupied housing	89.45	8.81
Single-parent households	20.55	17.64
Difference in percentage of Black	19.40	42.47
Difference in percentage of Latino	1.02	25.87
Difference in concentrated disadvantage	0.65	1.43
Difference in residential stability	-0.05	0.67
Difference in ethnic heterogeneity	3.35	25.80
Difference in percentage of occupied	-1.21	11.94
Difference in single-parent households	8.35	24.92

Note: n = 6.846.

of proximity. We calculate the *Euclidean distance* in miles between a suspect's home and each of the other neighborhoods in Tampa using the longitude and latitude of the suspect's home address and the longitude and latitude of the address for each burglary incident. Since offenders tend to commit crimes close to their home, the probability a suspect will select a particular neighborhood decreases as the distance from the neighborhood increases. To capture this, we include a measure of *distance squared*; we are unaware of any extant journey-to-crime literature that has included a similar indicator. We then centered the two distance measures to reduce any potential problems with multicollinearity. On average, a suspect targeted a neighborhood 2.75 miles from his home and 14.5 percent of suspects targeted their home neighborhood. For suspects offending within their own neighborhood, the average distance traveled between the home address and the target address was .28 miles.

Our analytic strategy necessitates a large data structure in which each of the 5,182 incidents has a separate row for each choice alternative. The model is such that an individual suspect evaluates the utility of committing burglary in neighborhood k out of all 334 potential neighborhoods based on

the neighborhood characteristics (X) and distance  $(D \text{ and } D^2)$  from his own neighborhood. Thus, our equation is as follows:

$$Y_k = \beta_1 D_k + \beta_1 D_k^2 + \Gamma_1 X_k + \varepsilon_k, \tag{1}$$

where  $Y_k$  is the neighborhood in which the offense was committed,  $D_k$  is the distance between the suspect's home neighborhood and the target neighborhood with a  $\beta_1$  effect on neighborhood choice,  $D_k^2$  is the squared distance between the suspect's home neighborhood and the target neighborhood with a  $\beta_2$  effect on neighborhood choice,  $X_k$  represents the vector of neighborhoodlevel characteristics including concentrated disadvantage, residential stability, racial/ethnic composition, percentage of occupied households, and single-parent households with a  $\Gamma_1$  vector of those effects on neighborhood choice, and  $\varepsilon_k$  represents the error term which is *iid* (independent and identically distributed) Gumbel distributed. Since we want to examine the probability that a particular neighborhood k is selected relative to j alternatives, we employ a conditional logit model (Ben-Akiva and Bierlaire 1999) that evaluates the likelihood that neighborhood k will be selected relative to all other remaining options. We thus modify equation (1) below to account for the probability of targeting a particular neighborhood out of all neighborhoods in the city:

$$P(Y = k) = \frac{e^{\beta_1 D_k + \beta_2 D^2_k + \Gamma_1 X_k + \varepsilon_k}}{\sum_{j=1}^{j} e^{\beta_1 D_k + \beta_2 D^2_k + \Gamma_1 X_k + \varepsilon_k}}.$$
 (2)

Of particular interest for this study, however, is whether a suspect will choose to commit a burglary in neighborhoods that resemble their own neighborhood or whether they target neighborhoods that are compositionally different. To answer this, we modified equations (1) and (2) by substituting variables representing the difference between neighborhood structure in the suspect's home neighborhood and these same characteristics for all other neighborhoods in the city. We calculate the difference with simple subtraction; this allows us to determine whether target neighborhoods are more likely to be similar or different than a suspect's home neighborhood regardless of the direction of the difference. However, the difference models do not capture how a suspect discriminates between neighborhoods relative to his own neighborhood. In order to test this, we include variables interacting the characteristics of the suspect's home neighborhood with the characteristics for each neighborhood. The interaction models account for the directionality of the difference and provide a more direct test of how the suspect's home neighborhood might condition which neighborhood is targeted.

We run a series of three models: (1) We estimate the characteristics of targeted neighborhoods regardless of characteristics of the suspect's home neighborhood, (2) we predict the probability that a neighborhood will be selected for burglary while accounting for the *difference* between home and target neighborhoods regardless of the directionality of this difference, and (3) we evaluate the likelihood that a neighborhood will be selected based on the relationship between the characteristics of the home and target neighborhoods. In all models, our dependent variable is dichotomous where 1 is equal to the selected neighborhood and 0 represents the remaining unselected options. The coefficient values represent the log of the odds, but taking the exponent  $(e^{\beta})$  gives the odds ratio and the formula  $(e^{\beta} - 1) \times 100$  gives the percentage change in the odds for each one-unit increase in the independent variable. Excluding the distance measures, all variance inflation factors are below 4. All analyses are run in Stata 14.0.

## Results

We first present the results that examine neighborhood characteristics that may attract an offender, regardless of the composition of the suspect's own neighborhood (Table 2, model 1).

First, we find that neighborhood characteristics consistent with a social disorganization perspective predict which neighborhoods are more likely to be targeted for burglary. Targeted neighborhoods tend to have a larger Black population (b=.003,  $e^b=1.003$ , p<.001): a 10 percent increase in the percentage of Black residents increases the odds of a neighborhood being targeted by 3.0 percent. <sup>10</sup> We also find that suspects are more likely to target neighborhoods that are high in disadvantage (b=.169,  $e^b=1.184$ , p<.001) and low in factors associated with social cohesion: residential stability (b=-.232,  $e^b=1.261$ , p<.001) and ethnic heterogeneity (b=.010,  $e^b=1.010$ , p<.001).

Second, our findings corroborate research that has shown that potential offenders are less likely to target locations that are geographically distant (e.g., Rossmo 2000). The likelihood of a suspect selecting a particular neighborhood is inversely related to distance from his home (b=-.417,  $e^b=0.659$ , p<.001). However, we also find that distance squared is significant and positive (b=.027,  $e^b=1.027$ , p<.001). For a small percentage of incidents, <sup>11</sup> once a neighborhood is located greater than 10 miles away, the odds of a suspect selecting a neighborhood *increase*. Although this finding is somewhat surprising, a longer journey to crime may be more common than previously thought. Prior research has found that although suspects are more

Destination in Tampa, Florida.		
Table 2. Discrete Choice Model of I	Neighborhood Character	istics of Burglary

Predictors	Model I	Model 2
Distance (centered)	-0.417*** (.00544)	-0.420*** (.00545)
Distance squared (centered)	0.0270*** (.000555)	0.0272*** (.000554)
Percentage of Black	0.00339*** (.000688)	, ,
Percentage of Latino	0.00108 (.000863)	
Concentrated disadvantage	0.169*** (.0204)	
Residential stability	-0.232*** (.0460)	
Ethnic heterogeneity	0.0101*** (.000825)	
Percentage of occupied	0.0103*** (.00233)	
Single-parent households	-0.0000117 (.000902)	
Difference in percentage of Black		-0.00375*** (.000642)
Difference in percentage of Latino		-0.00181** (.000804)
Difference in concentrated disadvantage		-0.144 <sup>*</sup> (.0189)
Difference in residential stability		0.164*** (.0422)
Difference in ethnic heterogeneity		-0.00844*** (.000764)
Difference in percentage of occupied		-0.00717*** (.00214)
Difference in single-parent households		-0.000287 (.000842)
BIC	27,823.569	27,701.241
Log likelihood	-35,876.438	-35,748.470

Note: n = 6,846. Standard errors in parentheses.

inclined to target neighborhoods in close proximity, they may be willing to travel further distances for particularly valuable targets (Baldwin and Bottoms 1976; Gabor and Gottheil 1984; Morselli and Royer 2008; Pettiway 1982; Snook 2004; Van Koppen and Jansen 1998) or to areas with a lower risk of apprehension (Vandeviver et al. 2015). In the current study, suspects traveling to neighborhoods greater than 10 miles from their home neighborhood selected targets with significantly more economic resources and which are slightly more ethnically diverse in composition (Vandeviver et al. 2015). Note that this effect remains constant and fairly stable across all models. Importantly, if we omit our measure of distance squared from our models, the pattern of distance decay would mirror prior research. This suggests that distance decay may not be universally true in all instances (see

<sup>\*\*</sup>b < .05. \*\*\*b < .01.

Townsley and Sidebottom 2010; Vandeviver et al. 2015) and that future research should consider long crime trips.

Our next analysis examines whether neighborhoods that are more similar or more different than the suspects' home neighborhoods are preferred targets (Table 2, model 2), controlling for distance. These models test whether economic or racial differences between the origin and destination neighborhood act as a barrier for target selection. Compared to where offenders live, neighborhoods that have a different percentage of Black or percentage of Latino residents, ethnic heterogeneity, concentrated disadvantage, or percentage of occupied housing are less likely to be targeted for burglary regardless of whether those differences are positive or negative. A 10 percent difference in the Black population compared to the suspect's home neighborhood reduces the likelihood that a neighborhood will be targeted for burglary by close to 4.0 percent (b = -.0038,  $e^b = 0.996$ , p < .001). Likewise, as the difference in concentrated disadvantage between the home and target neighborhoods increases there is a corresponding decrease in the odds that a neighborhood will be targeted (b = -.144,  $e^b = 0.866$ , p < .001). Thus, potential offenders tend to select similar target areas. However, there is some evidence that offenders are more likely to target neighborhoods that are different in residential stability: a 10 percent difference in residential stability in the suspect's home neighborhood relative to the target neighborhood increases the likelihood of burglary by nearly 18 percent (b = .164,  $e^b = 1.178$ , p < .001).

The neighborhood difference findings (Table 2, model 2) do not capture how a suspect discriminates between neighborhoods relative to the characteristics of his neighborhood specifically. In Table 3, we include multiplicative interaction terms that allow us to understand the directionality of these relative differences.

Findings in Table 3 largely corroborate earlier findings that burglars are more likely to target neighborhoods that are similar to their own. However, we find some evidence that suspects may select neighborhoods that are more vulnerable relative to their home neighborhood. We find a positive and significant relationship between home disadvantage and targeted neighborhood disadvantage (Table 3, model 1). In order to more easily interpret this relationship, we graph the results in Figure 1, where the x-axis represents the level of concentrated disadvantage in the selected target neighborhood at high (one standard deviation above the mean), average (mean), and low (one standard deviation below the mean) levels. Levels of concentrated disadvantage in the suspects' home neighborhoods are categorized in a similar manner: light gray represents low disadvantage (one standard deviation below the mean), diagonal stripes are average disadvantage (mean),

Table 3. Discrete Choice Model of Relative Influence of Neighborhood Characteristics on Burglary Destination in Tampa, Florida.

Predictors	Model I	Model 2	Model 3	Model 4	Model 5
Distance (centered)	-0.413***	-0.412***	-0.407****	-0.413***	-0.415***
Distance squared (centered)	0.0268***	0.0268***	0.0263%	(0.00347) 0.0266***	0.0268***
Percentage of Black—target neighborhood	(.000561) 0.00386****	(.000555) 0.00325***	(0.000568) -0.00192**	(0.000560) 0.00341****	0.00335***
Percentage of Latino—target neighborhood	(.000694) 0.00134	0.000689)	(0.000937) 0.000958	(0.000689) -0.00479***	(0.000689)
Concentrated disadvantage—target neighborhood	0.0665***	0.175***	0.172***	0.170***	0.169***
Residential stability—target neighborhood	0233) 0.230**** (0441)	-0.223*** -0.223***	(0.2203) -0.240***	(5.5254) -0.233****	-0.226*** -0.226***
Ethnic heterogeneity—target neighborhood	0.0107***	0.0101	0.0113***	(250.0) 0.0107***	0.00442***
Percentage of occupied—target neighborhood	0.0103**** 0.0103****	0.0119***	0.000942) 0.0106***	0.000830)	0.0101
Single-parent households—target neighborhood	0.0000465	-0.0000632	0.000106	0.0000661	-0.0000173
Disadvantage $ imes$ disadvantage	0.0854***	(100000.)	(50,000.0)	(50,000.0)	(50,505.5)
Stability $ imes$ stability	(2000)	0.650***			
Percentage of Black $ imes$ percentage of Black		(200.)	0.000109****		
Percentage of Latino $ imes$ percentage of Latino			(22.22.1)	0.000210***	
Heterogeneity $ imes$ heterogeneity				(5.736 - 63)	0.000123***
BIC Log likelihood	27,555.433 -35,671.294	27,621.179 -35,737.566	27,683.528 -35,773.512	27,708.985 35,786.241	(2.47e-03) 27,734.037 -35,798.767

Note: n=6,846. Standard errors in parentheses. \*\*p<.05.\*\*\*p<.01.

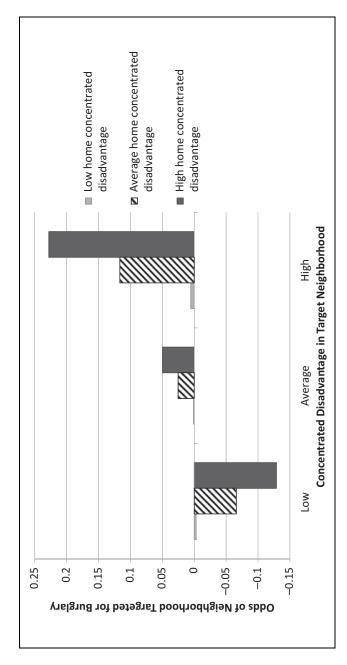


Figure 1. Effect of concentrated disadvantage in target neighborhood on likelihood of burglary, moderated by level of concentrated disadvantage in home neighborhood.

and the dark solid bar represents high concentrated disadvantage (one standard deviation above the mean). 12

Two primary conclusions can be made from Figure 1. First, suspects from all neighborhoods are much more likely to target neighborhoods with high levels of disadvantage. Since we control for distance, this means that potential burglars target disadvantaged neighborhoods above and beyond geographic proximity, which suggests they may go out of their way to target impoverished areas. For suspects residing in high disadvantage areas, this means burgling in similar neighborhoods and suggests that burglars from high disadvantage areas may be most comfortable operating within areas that are most familiar, likely because they are most aware of the risks in neighborhoods that resemble their home. For suspects living in more well-off areas, however, this suggests that they seek out areas with more disadvantage. For example, the odds that a suspect from a neighborhood with average disadvantage selects a target that is highly disadvantaged are far *greater* than his odds of targeting a similar or lower disadvantaged neighborhood. These suspects may be capitalizing on opportunities due to the lower levels of social cohesion typically found in more disadvantaged neighborhoods, even though these areas may have less lucrative targets. Second, Figure 1 also shows that the odds that a suspect from a high disadvantage neighborhood targets a neighborhood with lower disadvantage are incredibly low. Contrary to relative deprivation theory, burglary suspects are not selecting neighborhoods that are better off and which may have more valuable targets than their home area. The decision where to offend is likely based on factors besides geographic distance and potential profit. A similar pattern of results is found for levels of residential stability (not shown): (1) burglars are much more likely to target neighborhoods that have similar levels of residential stability, with the exception that suspects from neighborhoods with an average level of residential stability prefer targets that are more *unstable* and (2) burglars from highly unstable neighborhoods are almost completely unlikely to select a residentially stable neighborhood to target.

We also find evidence that racial/ethnic differences moderate targeting decisions (Table 3, models 3 and 4): the interactions between home and target racial/ethnic composition are significant and positive for both the percentage of Black population and the percentage of Latino residents. However, the conditioning effect of home neighborhood racial/ethnic composition on target neighborhood selection varies slightly by race or ethnicity. Figure 2 presents the results for the conditioning effects of percentage of Black in the suspect's home neighborhood on target selection, and Figure 3 shows the same relationships for the home and target neighborhood percentage of Latino.

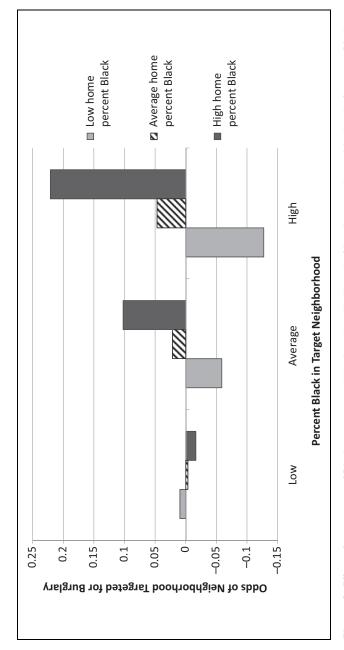


Figure 2. Effect of percentage of Black in target neighborhood on likelihood of burglary, moderated by level of percent Black in home neighborhood.

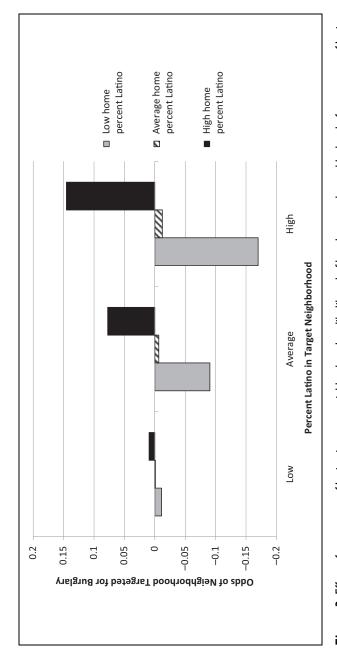


Figure 3. Effect of percentage of Latino in target neighborhood on likelihood of burglary, moderated by level of percentage of Latino in home neighborhood.

Figure 2 shows that suspects whose home neighborhoods have a high or low percentage of Black residents are most likely to target similar neighborhoods. This finding is in line with our earlier conclusion that differences in the Black population between a suspect's home neighborhood and the target reduce the likelihood that a neighborhood will be selected for burglary. Further, since these neighborhoods are either predominantly Black or predominantly not Black, this suggests that burglars are disinclined to offend where they may stand out and indicates that race may be a barrier to offending. However, there are two exceptions. First, we find that suspects living in high Black neighborhoods also target neighborhoods with average percentages of Blacks, although to a lesser extent. This may reflect the general attractiveness of racially and ethnically diverse communities as places where collective efficacy and territoriality are low. Second, suspects living in neighborhoods with moderate levels of Black residents have higher odds of targeting areas with more Black residents. This may represent would-be burglars interpreting a predominantly Black racial composition as a proxy for disadvantage and a higher tolerance for crime enabling suspects to operate with impunity (Quillian and Pager 2001).

Figure 3 shows the moderating effect of the percentage of Latino in the target neighborhood to influence target selection. While the percentage of Latino alone is not a significant predictor of neighborhood selection in earlier models, when both the Latino population in the origin and destination neighborhood are interacted, it becomes significant. The targeting of neighborhoods based on Latino composition is both similar and different to targeting based on the percentage of Black residents. For burglars living in communities with a high Latino population, we find similar patterns as suspects in high Black neighborhoods: (1) the odds are greatest that they target areas with a similarly large Latino population, but (2) they also select targets with average percent Latino. Where the conditioning effect of race differs is that burglars living in communities with low or average percent Latino are unlikely to target any type of Latino neighborhood.

Finally, we examine how racial/ethnic diversity in a neighborhood conditions neighborhood selection (Table 3, model 5). Figure 4 reveals that the odds a neighborhood with high levels of racial/ethnic heterogeneity will be targeted are greater regardless of the level of heterogeneity in the suspect's home area. Even suspects who reside in neighborhoods with low heterogeneity (i.e., homogenous neighborhoods) are less likely to target similar areas and are more likely to burgle in more diverse neighborhoods.

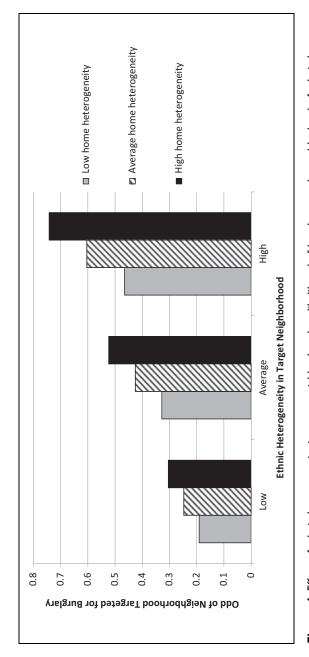


Figure 4. Effect of ethnic heterogeneity in target neighborhood on likelihood of burglary, moderated by level of ethnic heterogeneity in home neighborhood.

## **Discussion**

Many empirical studies on neighborhoods have found that most offenders live and commit crimes in the same general area (e.g., Rossmo 2000), but little research has examined how the composition of the neighborhoods in which offenders live might condition the types of neighborhoods offenders target. We draw upon elements of relative deprivation and social disorganization theories to (1) identify characteristics of neighborhoods that are most commonly targeted for burglary, (2) determine whether burglars are more likely to target neighborhoods that are similar or dissimilar to their home neighborhood, and (3) for burglars targeting different types of neighborhoods, investigate what these differences are relative to home neighborhood characteristics. We find that burglary patterns are not only influenced by the features of target neighborhoods but are also motivated by the characteristics of the offender's home neighborhood. Our major findings include the following: (1) neighborhood characteristics are associated with target selection, above and beyond geographic distance, (2) burglars generally target similar types of neighborhoods, but (3) suspects who burgle in different types of neighborhood generally select targets that are worse off than their home. Thus, while burglars have a relatively circumscribed activity space, with few exceptions, burglars further limit where they target based on similarity to their home neighborhood. We elaborate below.

First, we find that a neighborhood's social structure predicts whether it will be targeted for burglary. Neighborhoods exhibiting more indicators of social disorganization are more likely to be targeted. For example, ethnic heterogeneity, a large Black population, and economic disadvantage increase the likelihood that a neighborhood is targeted while residential stability decreases this likelihood. This is consistent with prior research suggesting that crime typically occurs in disadvantaged neighborhoods due, in part, to lower levels of social control (e.g., Pratt and Cullen 2005). Further, given that most offenders live in disadvantaged neighborhoods, this finding could reflect a proclivity of the offender to target areas that are most familiar.

Second, burglars are most likely to target destinations that are similar to where they live: as differences between the sociodemographic characteristics of the origin and destination neighborhood increase, the likelihood of a particular neighborhood being targeted decreases. This suggests that above and beyond distance, offenders seek out destinations that are familiar in terms of neighborhood composition. Given the spatial concentration of neighborhoods with similar characteristics, different types of neighborhoods may be geographically too distal to be worth the risks, whereas

potential burglars are most aware of the risks associated with neighborhoods that are like their home area. Indeed, Bernasco (2010b) finds that offenders are more likely to commit crimes in their current or former neighborhood than in areas where they have never lived, suggesting that offenders are more willing to travel to familiar areas than to venture into the unknown. This also indicates that a potential offender may have an awareness space that is limited to the activity spaces associated with his current or former residence (Lammers et al. 2015). Further, differences across various socioeconomic characteristics—race, disadvantage, and stability—might act as barriers that discourage suspects from viewing those neighborhoods as optimal targets (Ratcliffe 2003; Reynald et al. 2008). Potential offenders may avoid these areas because they are unaccustomed to the social norms and expectations, factors that would make them more identifiable as an outsider.

Third, we find evidence that some suspects deviate from the larger trend and offend in neighborhoods that are different than their home. We find little support for relative deprivation theory: suspects from highly disadvantaged neighborhoods are extremely unlikely to target areas that have low levels of disadvantage. Instead, suspects who burgle in dissimilar neighborhoods prefer targets that are more disadvantaged, have a larger Black population, and lower levels of social cohesion. Burglars from all neighborhoods select destinations that are highly disadvantaged regardless of disadvantage in their home neighborhood. Analogously, suspects living in neighborhoods with an average percentage of Black population are more likely to choose destinations that have more Black residents. Predominantly Black neighborhoods may convey that the risk of apprehension is lower since these neighborhoods are stereotypically viewed as poor (Taub, Taylor, and Dunham 1984) and tolerant of crime (Quillian and Pager 2001). This suggests that burglars consider factors besides geographic distance and wealth in determining where to offend, corroborating earlier studies finding that affluence is *not* the primary driving force behind target selection (e.g., Bernasco and Luykx 2003; Vandeviver et al. 2015).

The risk of detection may be a stronger motivator behind destination selection than target value. The likelihood of apprehension is reduced in neighborhoods where social cohesion has been undermined by residential instability and racial diversity. Indeed, we find that one of the most attractive features of neighborhoods appears to be racial/ethnic diversity: burglars from *all* neighborhood types are much more likely to target highly heterogeneous neighborhoods. This may be because in diverse areas the offender is more likely to remain anonymous, and lower social cohesion lessens the

risk of detection. As such, burglars may be willing to sacrifice target value and expect to be compensated by an increased probability of a successful burglary. Indeed, Vandeviver and colleagues (2015) found that burglars are willing to travel further to ethnically diverse targets. This may be particularly problematic in cities such as Tampa which is relatively more diverse and racially/ethnically integrated compared to other U.S. cities. Further, the increasing availability of portable high-value targets (e.g., laptops, smartphones, tablets, etc.) may mitigate the need to specifically target more affluent neighborhoods, in which case, concerns about the likelihood of detection take primacy (Bersnasco and Luykx 2003).

While our research expands the literature on offense patterns by examining home and target destination characteristics, we are unable to control for differences related to the age of the suspect or his criminal history. However, recent research suggests that individual attributes may be inconsequential relative to the larger environmental characteristics (Vandeviver et al. 2015). Additionally, although different land uses may serve as crime attractors (Bernasco and Block 2009, 2011; Johnson and Summers 2015), we could not account for variations in land use or across residential versus commercial targets, and we do not capture temporal variation, although the attractiveness of a particular neighborhood target might vary by time of day or day of week (Ratcliffe 2006). Ideally, future research should consider examining these factors, although they may be less pertinent to the current study given that we are examining burglary decision-making based on relative differences between home and target locations. From a theoretical point of view, it is unlikely that the differences in land use patterns would be influential in a manner that is not captured in the relative differences in disadvantage or other structural characteristics (Gruenewald et al. 2006; Nielsen and Martinez 2003).

Like many studies using arrest data, we have no information on the offending patterns or decision-making criteria of the remaining 80 percent of burglaries that were not cleared. Our results indicate that burglars want to minimize the likelihood of detection, and to do so, target neighborhoods in which they are more familiar or where the composition of residents is not conducive to social cohesion or collective efficacy. We may be underestimating burglars who commit crimes further away and therefore are less likely to be caught (Townsley and Sidebottom 2010). However, the likelihood of arrest is not likely tied to geography in a way that systematically biases the results. Bernasco et al. (2013) found little evidence that location factors were related to clearance rates, while Johnson, Summers, and Pease (2009) found that

solved and unsolved offenses had similar spatiotemporal patterns. Further, as Bernasco and Nieuwbeerta (2005) demonstrate, there is no systematic relationship between clearance rates and neighborhood characteristics. This suggests that although we cannot account for burglaries in Tampa in their entirety, there is no reason to expect that the burglaries that were not cleared would be linked to geography. Despite these limitations, we have shown that ecological characteristics of neighborhoods matter for burglars selecting targets and that these factors matter above and beyond geographic location. While most offenders selected destinations that were qualitatively similar—as well as nearby—to their home neighborhood, economic disadvantage, residential instability, and diversity of target neighborhoods constitute important pull factors that are seemingly worth the risks associated with travel.

## Conclusion

While substantial research has examined how target availability might trigger offending on the part of a motivated offender, less research has concentrated on how the neighborhood context within which an offender lives might condition which neighborhoods are targeted for crime. This study has shown that not only are neighborhood characteristics important for determining which neighborhoods are more likely to be targeted, but that the characteristics of an offender's home neighborhood inform how an offender might assess the conditions in other neighborhoods. Indeed, the broader context within which an offender's neighborhood is located both constrains and conditions offender decision-making, indicating that the characteristics of an offender's home neighborhood play a central role in determining which neighborhoods are ultimately targeted for crime. A key insight from this study is that burglars have a relatively small spatial footprint: burglars are limited not only by distance, but, with few exceptions, generally also limit themselves to targeting neighborhoods that are relatively similar to their own. When suspects deviate from this pattern, it is to target neighborhoods with lower social cohesion. This insight might assist law enforcement efforts in narrowing down where potential suspects might be located. Further, crime forecasting models (Caplan, Kennedy, and Miller 2011) might consider how the spatial patterning of similar neighborhood characteristics creates islands that may have a higher likelihood of burglary. Ultimately, an offender's home neighborhood plays a greater role in determining target location than proximity alone:

neighborhood characteristics are important for determining crime location, but they work in tandem with an offender's home neighborhood characteristics to predict where burglars will offend.

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#### **Notes**

- Note that although males and females commit burglaries, we use the male pronoun throughout this article in order to simplify the presentation of information. In almost all cases, in which we reference "he" we mean "he or she."
- 2. We are unable to distinguish between residential and commercial burglaries in our data. Prior scholarship is mixed on the relationship between distance and commercial versus residential targets: Van Koppen and Jansen (1998) found that professional robbers or robbers of commercial targets tend to travel further, while other research has shown that commercial robbers live close to home, within 1.55 miles of their residence (Snook et al. 2006). Other research shows that there is no significant difference between types of burglars (Snook 2004). For example, Pyle (1976) found little difference between average distance traveled of residential burglars (2.48 miles) and nonresidential burglars (2.34 miles). These findings are mirrored by Townsley and Sidebottom (2010) who find few differences between distance traveled for residential versus nonresidential burglaries. Given the disparity in findings, we do not expect that our inability to isolate commercial from residential burglaries to bias our results in any specific way. Regardless, we recommend that future research account for differences in types of targets.

- On average, the clearance rate for burglary in the United States is about 14
  percent (Weisel 2002). In Tampa, the clearance rate is much higher, around 20
  percent in 2012 (Kaste 2015).
- 4. In line with a number of extant journey to crime studies (e.g., Bernasco et al. 2013; Vandeviver et al. 2015), we treat incidents with multiple offenders as independent decision-making events but account for the nonindependence of the observations by clustering by incident in our analysis. To ensure that the inclusion of incidents with multiple offenders did not bias our results, we ran ancillary models where we excluded incidents in which there were multiple offenders and detected no significant differences. Notably, Snook (2004) found that the journey to crime distance for co-offending groups is not significantly different than the distance individual burglars' travel. Bernasco et al. (2013) also found no statistically significant differences between models of co-offender groups and individual robbers. We report similar findings. Note that more than 75 percent of all cleared burglaries in Tampa over our time period were committed by a single offender.
- 5. Recent journey to crime research (e.g., Bernasco 2010a; Bernasco et al. 2013; Bernasco and Block 2011) has relied on smaller units of analysis (e.g., blocks) in order to assess criminogenic nodes, hot spots, or spillover effects. However, our research has a different objective which emphasizes the importance of geographic context. Therefore, we rely on block groups as our unit of analysis in order to account for social and demographic characteristics of neighborhoods that likely influence target selection and are not available at the block level. Recent scholarship also relies on block groups, census tracts, or their equivalent (e.g., Bernasco and Block 2009; Johnson and Summers 2015; Lammers et al. 2015; Townsley et al. 2015).
- 6. We normalized 2010 tract boundaries into 2000 boundaries using the census tract crosswalk files provided by the U.S. Census. The relationship file is available via the U.S. Census at http://www.census.gov/geo/maps-data/data/relationship.html.
- 7. Given the overlap in the distance measures, the variance inflation factor (VIF) scores for distance and distance squared are approximately 8; VIF scores for all other variables in the model were below 4. A VIF of 10 is a common recommendation made by econometricians, which corresponds to the .10 tolerance recommendation (Kennedy 2003).
- 8. In ancillary models, we removed incidents in which an individual targeted his own neighborhood. The pattern of results was similar to those in which the home neighborhood incidents were included; therefore, we decided to include these incidents.
- 9. Gumbel is an extreme value distribution and assumes that the error term is independent and identically distributed Gumbel with a mode of 0 and scale  $\gamma$ .

- The shape and dispersion of the Gumbel distribution are thus defined by the mode and the scale (Jacobs et al. 2012).
- 10. Since the percentage of Black residents variable is scaled 0 to 100,  $(e^{\beta} 1) \times 100$  gives the percentage increase for a 1 percent increase in the Black population. In order to translate this into a more meaningful increase, we first multiply the coefficient by 10: (exp  $(.003 \times 10) 1) \times 100$ .
- 11. Only 159 incidents occurred at a distance greater than 10 miles from a suspect's home neighborhood. These more distal targets are considerably less disadvantaged. For instance, the vast majority of incidents included in the analysis (5,680) occurred within 5 miles of a suspect's home. In those neighborhoods, the mean level of disadvantage is .80, compared to only .17 in neighborhoods located more than 10 miles from a suspect.
- 12. These categorizations are used in all remaining figures. The x-axis has also been centered to 0 for ease of interpretation.
- Notably, our analyses utilize data with a higher clearance rate than prior journey to crime scholarship (Bernasco and Luykx 2003; Bernasco and Nieubeerta 2005; Clare, Fernandez, and Morgan 2009; Johnson and Summers 2015; Vandeviver et al. 2015).

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