Literature Review: Importance of Spatial Analysis to Chicago Crime

Name: Shanglun Li

My project aims to analyze the crime rate of Chicago communities from a spatial aspect. It draws attention to some types of social tie that is particularly conducive to criminological behaviors: educational level, employment rate, and income rate. Neighborhood scholars have recently begun to note that “neighborhood effects” are in fact largely approximating the impact of spatially-bounded, local social networks (Hipp et al., 2012; Sampson, 2012). Specifically, social networks are thought to be a key intervening mechanism explaining the observed relationship between neighborhood features and local crime rates (Hipp and Boessen, 2013; Kubrin and Wo, 2016; Soller and Browning, 2014). Importantly, while social ties are typically construed in terms of inhibiting crime, such ties may also facilitate problematic behaviors (Browning et al., 2004). At a basic level, crime and deviance require information, skills, and logistical support, as well as deviant social norms that support such behavior. For example, social learning theory suggests that social ties—especially among peers—facilitate the acquisition of such resources (McGloin and Nguyen, 2013). Likewise, research on street gangs suggests that internal processes directly related to social ties among members—such as cohesion or loyalty—facilitate a range of group and individual deviance and criminal behavior (Hughes, 2013).

Though much of the empirical work on neighborhood effects focuses on how social interaction plays out within a given community, the modern city is not characterized by exclusively local ties but rather by “spatially unbounded” ties, i.e. connections between geographically distant people and communities (Wellman, 1999). Previous research suggests that social ties between spatially distant neighborhoods are generated via institutions, such as schools or community organizations, that provide a shared social context (Sampson, 2012). For example, gang involvement (Tita and Radil, 2011), and homophily in neighborhood-level socioeconomic indicators are thought to contribute to such ties (Mears and Bhati, 2006). Moreover, personal similarities create opportunities for conflict that could escalate into violence.

Recent work provides empirical support for the hypothesis that inter-neighborhood social ties are consequential for crime; scholars have even identified specific diffusion patterns that can only be explained by incorporating social network data into analyses (Tita and Radil, 2011). Though this recent work on gangs illuminates how violence diffuses between a given pair of socially connected neighborhoods, it fails to adequately capture how pairs of neighborhoods are nested within a larger “network of neighborhoods” (Sampson, 2012) or how the diffusion of crime might be related to social ties outside of the gang context. To our knowledge, only one previous study has investigated the relationship between the structure of inter-neighborhood networks and local crime (Hipp et al., 2013). Hipp et al. (2013) used simulated social network data to demonstrate that inter-neighborhood ties are largely associated with reduced levels of neighborhood crime. Continuing this line of inquiry, we argue that social ties between neighborhoods −whether they are deviant or pro-social—do not exist in isolation, and ought to be examined in relation to the broader social organization of the city. In much the same way, we anticipate that there are several ways that the city-wide structure of inter-neighborhood ties could alter the dynamics of influence between pairs of neighborhoods.

Moreover, researchers have long noted the strong similarity among people, organizations, or communities connected through various forms of relations, including friendships, work connections, discussions (Ibarra, 1995; Marsden, 1988; Neal and Neal, 2014) and even in patterns of crime victimization (South and Felson, 1990; South and Messner, 1986; Sampson, 1984). Shared race, ethnicity, religion, education, and social class status have all been shown to increase the likelihood of inter-personal and inter-organizational ties (McPherson et al., 2001). For instance, Galaskiewicz and Shatin (1981) indicate that connections between community organizations during challenging times are most likely activated based on similar background.

**Reference**

Analysis of Crime in Chicago: New Perspectives to an Old ... rri.wvu.edu/wp-content/uploads/2013/07/Fullpaper\_5.B.1.pdf.

Friedman, Matthew, et al. Crime Trends, 1990-2016. Brennan Center for Justice at New York University School of Law, 2017.

Graif, C., Lungeanu, A., & Yetter, A. M. (2017). Neighborhood isolation in Chicago: Violent crime effects on structural isolation and homophily in inter-neighborhood commuting networks. Social Networks, 51, 40-59. doi:10.1016/j.socnet.2017.01.007

Hughes, Lorine A., 2013. Group cohesiveness, gang member prestige, and delinquency and violence in Chicago, 1959–1962. Criminology 51 (4), 795–832.

Hipp, John R., Boessen, Adam, 2013. Egohoods as waves washing across the city: a new measure of ‘Neighborhoods’. Criminology 51 (2), 287–327.

Hipp, John R., Butts, Carter T., Acton, Ryan, Nagle, Nicholas N., Boessen, Adam, 2013. Extrapolative simulation of neighborhood networks based on population spatial distribution: do they predict crime? Social Networks 35 (4), 614–615.

Kubrin, Charis E., Wo, James, 2016. Social disorganization theory’s greatest challenge: linking structural characteristics to crime in socially disorganized neighborhoods. In: Piquero, Alex R. (Ed.), Handbook of Criminological Theory. Wiley-Blackwell, Oxford, pp. 121–136.

Marotta, P. (2016). Assessing Spatial Relationships Between Rates of Crime and Rates of Gonorrhea and Chlamydia in Chicago, 2012. Journal of Urban Health, 94(2), 276-288. doi:10.1007/s11524-016-0080-7

Mears, Daniel P., Bhati, Avinash S., 2006. No community is an island: the effects of resource deprivation on urban violence in spatially and socially proximate communities. Criminology 44 (3), 509–548.

McGloin, Jean M., Nguyen, Holly, 2013. The importance of studying Co-offending for criminological theory and policy. In: Morselli, C. (Ed.), Crime and Networks. Routledge, New York, pp. 13–27.

Moody, James, White, Douglas R., 2003. Structural cohesion and embeddedness: a hierarchical concept of social groups. Am. Sociol. Rev. 68 (1), 103–127.

Papachristos, Andrew V., 2009. Murder by structure: dominance relations and the social structure of gang homicide. Am. J. Sociol. 115 (1), 74–128.

Sanburn, J. (2016, Septemb er 19). Chicago Resp onsible for Nearly Half of U.S. Homicide Spike. Retrieved from <http://time.com/4497814/chicago-murder-rate-u-s-crime/>

Sampson, Robert J., 2012. Great American City. University of Chicago Press, Chicago, IL.

Soller, Brian, Browning, Christopher R., 2014. Neighborhood effects and social networks. In: Bruinsma, G.J.N., Weisburd, D.L. (Eds.), Encyclopedia of Criminology and Criminal Justice. Springer, New York, pp. 3255–3265.

Tita, George E., Radil, Stephen M., 2011. Spatializing the social networks of gangs to explore patterns of violence. J. Quant. Criminol. 27 (4), 521–545.

Wellman, Barry (Ed.), 1999. Networks in the Global Village. Westview, Boulder, CO.