Environmental Criminology
Neighborhood Analysis of Felony Assault in Manhattan's 23rd Precinct

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Abstract

This study aims to understand the crime patterns in Manhattan's 23rd precinct from the environmental criminology perspective by comparing it to the borough of Manhattan. Environmental criminology takes the stance that criminal events must be understood as a merging between offenders of victims or the criminal targets and the laws in specific settings at particular times and places (Wortley, 2008). Felony assault is identified to be disproportionately reported in the 23rd precinct and is the focus of the study. Two ideas are utilized to analyze the data. One is social disorganization theory; it refers to the failure of a neighborhood's social institutions to develop cohesion, exert social control, and diminish crime (Contreras, 2008). The other is the concept of community efficacy, which is defined as "a social cohesion among neighbors combined with their willingness to intervene on behalf of the common good" (Sampson, 1997). It is hypothesized the community efficacy is linked to reduced violence whereas social disorganization is linked to increased violence. These ideas are used to identify four environmental factors that will be measured at five hotspots. An interesting result is that every hotspot had at least one environmental factor, implicating that these factors may invite crime in these areas. Further research could test these factors by analyzing other street segments in hotspots and outside hotspots. The study should be replicated with different factors and the same street segments, as well as the same factors in different street segments.

Crime Analysis of the 23rd Precinct

Crime rate = # of crime/ (N persons/1,000)	23rd Precinct	Manhattan
Burglary	0.985	1.597
Felony Assault	**4.323**	**2.31**
Grand Larceny	4.049	10.187
Grand Larceny of Moor Vehicle	0.287	0.437
Murder	0.055	0.019
Rape	0.123	0.248
Robbery	1.983	1.664

Data and Methods

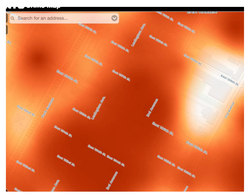
The data being observed is collected by New York City Police Department and the United States Census Bureau. The data collected will be the population and the crime statistics of manhattan and the 23rd precinct for 2018. Systematic social observation will be completed utilizing google maps street view. The variable being measured is the frequency of four factors at five different hotspot locations identified by the NYC crime rate statistics provided by the NYC open data.

First we have to identify a crime that is disproportionate in the precinct. This is completed by performing the following calculation at both the borough level and the precinct level: Crime rate = # of crime/ (N persons/1,000). Manhattan has a felony assault crime rate of 2.31 in 2018. The 23rd Precinct has a felony assault crime rate of 4.32 in 2018. From these calculations it is concluded that felony assault is a problem for the 23rd precinct in Manhattan.

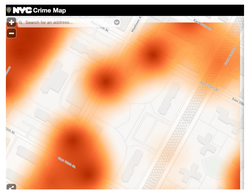
Following this step, the street segments for the study must be identified. The NYC Crime Maps is filtered to show hotspots for where the most felony assault reports are. The five hotspots chosen were East 106th St between 3rd Ave and Lexington Ave (**Hotspot #1**), Lexington Ave between 109th St and 110th Street (**Hotspot #2**), Madison Ave between 112th Street and 115th Street (**Hotspot #3**), Madison Ave between East 99th St and East 102nd St (**Hotspot #4**), 1st Ave between East 97th St and East 99th St (**Hotspot #5**).

The four factors being measured in the systematic social observation are playgrounds/school yards, public housing buildings, boarded windows, and public transportation stops. These factors were chosen due to their influence and implications of social control, collective efficacy, and routine activity theory.

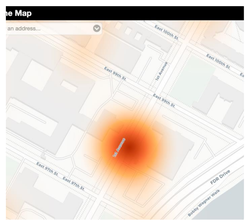
Hotspots



Hotspot #1: East 106th Street between 3rd Ave and Lexington Ave

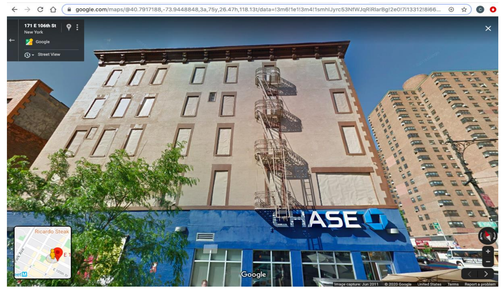


Hotspot #3: Madison Ave between 112th Street and 115th Street

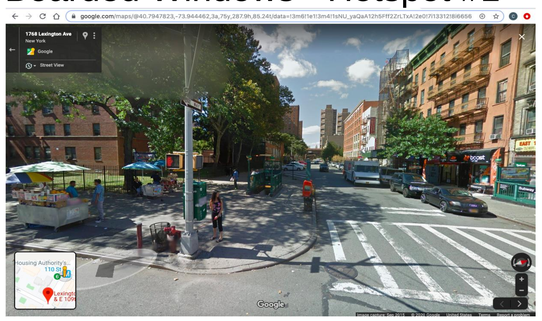


Hotspot #5: 1st Ave between East 97th Street and East 99th Street

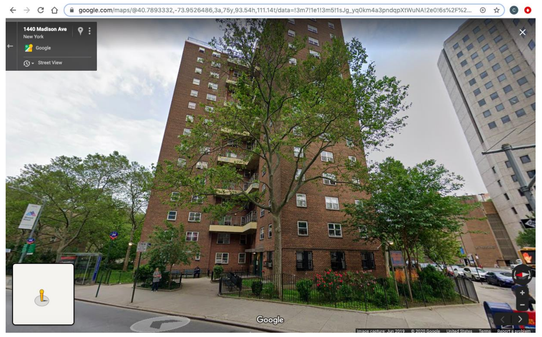
Systematic Social Observation



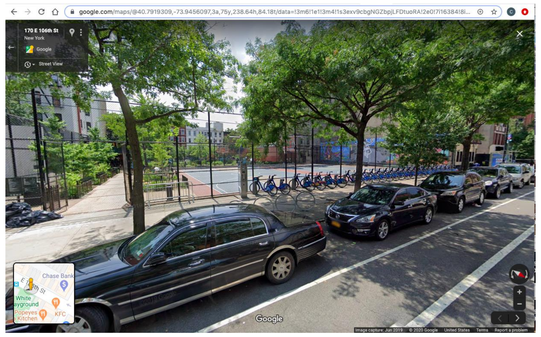
Boarded Windows - Hotspot #1



Public Transportation - Hotspot #2



Public Housing Building - Hotspot #4



Playground - Hotspot #1

Results/Discussion

Hotspot #1: East 106th Street between 3rd Ave and Lexington Ave
- Factor #1 Measurement- 1 Playground
- Factor #3 Measurement- 40 Boarded Windows
- Factor #4 Measurement- 1 Bus Stop

Hotspot #2: Lexington Ave between 109th Street and 110th Street
- Factor #2 Measurement- 1 Public Housing Building (Dewitt Clinton)
- Factor #3 Measurement- 38 Boarded Windows
- Factor #4 Measurement- 1 Bus Stop and 1 Subway Stop

Hotspot #3: Madison Ave between 112th Street and 115th Street
- Factor #2 Measurement- 4 Public Housing Building (Taft)
- Factor #4 Measurement- 1 Bus Stop

Hotspot #4: Madison Ave between East 99th Street and East 102nd Street
- Factor #2 Measurement- 3 Public Housing Buildings (George Washington Carver)
- Factor #4 Measurement- 2 Bus Stops

Hotspot #5: 1st Ave between East 97th Street and East 99th Street
- Factor #4 Measurement- 1 Bus Stop

The results for this study are interesting. There is something to say about three of five hotspots including public housing buildings. This study explored and analyzed crime patterns, so the next step is to alter the environment to decrease the opportunity for crime by designing and building the environment (Wortley, 2008). This data can be used to create a plan to reduce crime in these areas and build crime fighting strategies utilizing community efficacy and social control. There are also other factors in this neighborhood that contribute to crime that can be researched to further understand what may be influencing crime. In addition, this study can be recreated with the same factors and different street segments to compare the frequency of these factors and their relationship with crime even further. Alternatively, the study can be replicated using different factors, perhaps factors that prevent crime, and the same street segments to analyze preventative measures in the environment. It is highly encouraged to utilize these methods to conduct further research.

References

https://maps.nyc.gov/crime/
https://www.google.com/maps
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Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and Violent Crime: A Multilevel Study of Collective Efficacy. *Science*, *277*(5328), 918–924. doi: 10.1126/science.277.5328.918
Wortley, R. and Mazerolle, L. (2008). Chapter 1. Environmental Criminology and Crime Analysis: Situating the Theory, Analytic Approach and Application, pp. 1-18 in Wortley, R. and Mazerolle, L. (eds.) *Environmental Criminology and Crime Analysis.* Portland, OR: Willan Publishing.

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