– Independent Work Report Spring, 2019 –

Breaking Windows: A Study of Crime and Parking Tickets in New York City

Michael Weissman
Adviser: David Dobkin

Abstract

Write the abstract at the end when the entire paper is completed.

1. Introduction

The theory of Broken Windows Policing has been a hot topic of conversation over the past few years. In 1982, James Q. Wilson and George L. Kelling worte a piece in the Atlantic entitled "Broken Windows." In this piece they describe the intertwinedness of public disorder and crime. The analogy is used for boken windows in a neighborhood: if there are many broken windows that no one repairs, this shows that there is disorder in the area and it is a place where crimes would be tolerated. Eventually all the windows in the neighborhood will be broken and crime will be rampant (cite). This connection led many people to find a way to put these policies into action to see if they work in the real world. The most famous broken windows experiment was performed in New York City in the 1990's. In 1989 Kelling helped the head of the MTA with the rapid decline of subway use. Kelling first tested his broken windows theory here by removing grafitti and homelessness from the subways. As a result subway use increased and this was the first "win" for broken windows theory. From 1994 to 1996 William Bratton served as the police commisioner for New York City and implemented more active policing laws by cracking down on public drunkeness, turnstile juping, and aggressive panhandling (Harcourt). In 1998 Kelling and Bratton wrote a peice together describing how they used broken windows policing to make New York City a safer place (cite). Crime was down (BLANK) and othr statistics.

This picture seems like broken windows theory works all the time and every city in the world should be policing this way. This is not the case. Broken Windows theory has come under a lot of

scrutiny by many academics. Harcourt argues that there are many problems with Broken Windows policing. Wilson and Kelling primarily base their theory on work performed by Skogan, but when analyzing Skogan's results he found that if you adjust for poverty, stability, and race, the interesting correlations vanish. In addition to this Harcourt agrues that the decline in crime during Brattons tenure was a result of economic conditions, a shift from crack to heroin, fewer 18-24 year old males, and a larger police force. He is arguing that broken windows is not the sole reason for the decline. Gary Stewart wrote in the Yale Journal of the racial impacts of broken windows policing. He argues about the harmful impacts on minority communities of having a strong police pressence, as well as the disproportionate incarceration rates between blacks and whites.(cite)

Although there is a lot of backlash against the practices of Broken Windows policing, the city of New York continues to use these practices up until today. In 2014 Bill Bratton was brought back as the police comissioner in New York and released a report on the state of policing in 2015. This report, entitled "Broken Windows is not Broken", is a response to a report by the Office of the Inspector General for the NYPD (OIG). The OIG report claimed that quality of life policing (the crack down on minor infractions), had no relation to the decrease in crime in New York City from 2010 to 2015. In his response, Bill Bratton argues that the OIG report had too narrow of a focus and if you look closer at the data it is true that broken windows policing is responsible for the decline in crime. (cite) We see from here that the City of New York has not backed down from broken windows and has endorsed it as recently as 2015.

2. Motivation

As a New Yorker I have always been fascinated with Broken Windows policing and its effectiveness. As I was searching through the New York City Open Data database I found a large history of crimes reported in New York City. I also found a database of parking tickets issues in New York City. I decided to see if I could use parking tickets as a minor infraction in the framework of Broken Windows policing. The sentral question became: are parking tickets and crimes correlated? If the two of these variables are correlated then we could see that parking tickets can be used as a minor

infraction but if they are not correlated then this connection can not be made.

In the process of doing this reseach I started looking into different relationships I can study. Are there certain months that crimes/tickets are more prevalent? Are parking tickets and crimes distributed equally month over month? Are there certain days of the month that parking tickets are more common? These along with many other got answered by the time I was done with the project.

I also became interested in how weather relates to parking tickets and crime. Intuitively it would make sense that the more extreme the temperature, the less likely officers want to give tickets. These weather related questions also got an answer by the time the project was finished.

3. Related Work

3.1. NYC Parking

There have been many people who have studied the exact datasets which I have been using but they did so seperately. On Kaggle there was a competition to take the parking dataset and answer these questions: When are tickets most likely issued? Any Seasonality? Where are tickets most commonly issued? What were the most common years and types of cars to be ticketed? Four different people created kernals and came up with some answers to these questions (most cars were NY plates, noon was the time the most tickets were issued, Ford, Totyota and Honda were the most ticketed cars, and suburban cars were ticketed the most) (cite). A blogger named Ben Wellington has a website called iQuantNY, where he used NYC Open Data to delve deeper into NYC issues. He has a series on parking tickets as well where he studies the most blocked driveways in NYC as well as mapping travelers through ticketed liscence plates.(cite) One of his blogs was even used to prove that the city was improperly ticketing drivers in legal spots. (cite) While most of these projectsa re interesting they do not touch upon days of the week tickets are issued, weather, or correlating tickets and crime.

3.2. NYC Crime

In addition to working with the parking dataset, many people have also studied the exact crime dataset that I was looking at. There was also a kaggle thread for the crime dataset that had four contributors. These people studied the different relationship between the types of crimes that occured and the location of occurence. In addition, some students from NYU studied this dataset and "analyzed the top reported offenses for each of the five boroughs that form New York." (cite) This project goes borough by borough, type of crime by type of crime to see where certain crimes are concentrated.

3.3. Traffic Enforcement and Crime

While the above researches were all interesting, none of them focused on the relationship between the two. There have been many people that wanted to see how traffic enforcement can curb crime. In an opinion piece, Tom Vanderbilt argues that the more speeding tickets that are issues, the safer the world will be. He mentions that at least two of the 9/11 hijackers were stopped for speeding tickets (cite). This too can be seen in the framework of broken windows policing: giving more speeding/traffic violation ticekts will lead to less public disorder which will then lead to less crime. The National Highway Safety Administration found that for a period of three years (1994-1996) after implementing a new policy, the change in overall traffic citations rose by 24 percent, while the number of violent and property crimes decreased by 10 and 12 percent, respectively. (cite) Marc Weiss of Walden University conducted a similar study, referencing broken windows theory throughout his paper. Weiss studied five counties in South Carolina and was confident in reporting a negative correlation between traffic enforcement and crime rates during a five year period.(cite) These results were promising and in the process of my research I would hope to come to a similar result.

3.4. Weather and Crime

TALK ABOUT CRIME AND TEMPERATURE

4. Approach

The main goal of this project is to understand the relationship between crime and parking tickets in New York City. In addition to understanding this relationship, I wanted to further understand how weather affects crime and tickets as well. My research is to build on the research done by Weiss. Weiss focuses on all traffic violation while I focus solely on parking tickets. Traffic violations are more expensive to enforce and are much more dangerous than issuing parking tickets. For these reasons I decided to only study parking tickets to find a correlation between tickets and crime.