Journal of Public Management & Social Policy

Volume 29 | Number 1 Article 10

September 2022

Mirrored Windows Theory and the NYPD: Does Heavy Surveillance Policing Translate into Greater Use of Force

Deborah A. Carroll

Mirrored Windows Theory and the NYPD: Does Heavy Surveillance Policing Translate into Greater Use of Force?

Deborah A. Carroll
University of Illinois at Chicago

Broken Windows Theory stipulates a building with a broken window (representing minor crimes and disorder in the community) will lead to more destruction and carelessness of property (representing major violent crimes in the whole neighborhood) and has informed policing policy since the 1990s. This paper coins the term Mirrored Windows Theory by reversing the application of Broken Windows Theory and applying it to police officers to examine whether greater prevalence of broken windows-type tactics in the form of heavy surveillance policing leads to greater use of physical force by officers. Using panel data (2009-2016) of all stop-and-frisk incidents and civilian complaints against New York City police officers alleging use of physical force, Conditional Fixed Effects Negative Binomial Regression is used for analysis. Results indicate increases in 1) stop-and-frisk incidents that do not involve the use of physical force, and 2) civilian complaints for which police officers are exonerated are associated with increases in officers' actual use of physical force by 17.00% and 6.42%, respectively, within New York City neighborhoods on average. On the other hand, civilian complaints alleging inappropriate use of force are associated with a decrease in officers' actual use of physical force by 4.84% within New York City neighborhoods on average. These findings are robust while controlling for underlying neighborhood crime and demographics of each neighborhood police precinct each year.

Keywords: Broken Windows Theory, Mirrored Windows Theory, Bureaucratic Discretion, Negative Binomial Regression, Stop and Frisk, Heavy Surveillance Policing

Recently, Americans have become more acutely aware of police-civilian relations. Due to magnified attention on the persisting witnessing of police violence, each new story that surfaces divide communities on what feasible policy solutions exist for the problem. What catalyzed the public outrage and calls for greater social justice—although not for the first time—were primarily the deaths of Ahmaud Arbery in February 2020 and George Floyd in May 2020. Activists then began to spotlight Breonna Taylor's death, which went uninvestigated for several months, as well as the case of Elijah McClain, almost a year after

his death in 2019. Rayshard Brooks, Andres Guardado, Jacob Blake, Sean Monterrosa, and Eric Salgado, make up only a small number of cases at the current forefront of community protests and the Black Lives Matter (BLM) movement. What is primarily demanded at these protests is accountability for, and the end to, fatal police violence, and a comprehensive reform of the ethics, culture, and training that has potentially led to the current state of aggressive policing.

The literature overwhelmingly shows that the likelihood of physical force being used by police is higher for certain groups of people. For example, a recent study by Fryer (2017) on racial differences in use of force by police found that on non-lethal uses of force, Black and Latino people are greater than 50% more likely to experience some level of force in interactions with police. Another study by Edwards, Lee, and Esposito (2019), which used data on police-involved deaths to estimate how the risk of being killed by use of force in the United States varies across social groups, found that "African American men and women, American Indian/Alaska Native men and women, and Latino men face higher lifetime risk of being killed by police than do their White peers" (p.16793), with the risk highest for Black men who face about a 1 in 1,000 chance of being killed by police over their lifetime. The study also found that the average lifetime odds of being killed by police are about 1 in 2,000 for men and about 1 in 33,000 for women, with risk peaks between the ages 20 and 35 for all ethnic groups. Moreover, for young men of color, police use of force is among the leading causes of death (Edwards et al., 2019). Interestingly, however, even though minorities are disproportionately killed by police officers more frequently, research suggests that white officers are not necessarily more likely to use lethal force than nonwhite officers (Menifield et al., 2018).

Age, race, and gender have been the primary foci for understanding the policing and legal systems used to decide "who to target, how to intervene, and how much force should be applied in the process of policing" (Edwards et al., p.16793). However, as the aforementioned cases of alleged police misconduct in the U.S. have essentially triggered the Black Lives Matter movement and calls for greater social equity, it is important to consider other factors that potentially explain the use of force by police officers. As is widely noted in extant research, however, a primary obstacle to studying police use of force has been the lack of comprehensive and readily available data. For example, The Vera Institute of Justice (2020) found that only 50% of policing agencies in New York City reported their arrest data to the Federal Bureau of Investigation (FBI) in 2016. Gaps in availability of police data relating to civilian interactions have been a point of contention in the ongoing calls for social justice from those who claim that bureaucratic discretion (Lipsky, 2010) has led to varying levels of alleged harassment and aggressive actions by law enforcement officers. However, with data from the New York City (NYC) Civilian Complaint Review Board (CCRB) becoming publicly available for the first time ever in June of 2020, scholars are now better situated to further examine this important issue of community policing. Specifically, it is now possible to analyze civilian complaint data pertaining to the largest municipal police force in the nation and one that often serves as a leader in shaping policing policy—the New York City Police Department (NYPD). As such, this is one of the first academic studies to use these newly available CCRB data for conducting research on the use of force by police officers.

Introduced by George Kelling and James Wilson (1982), Broken Windows Theory (BWT) has informed and shaped policing policy since the 1990s. This theory stipulates that a building with a broken window (representing minor crimes in a particular area and symbolizing disorder in the community) will likely lead to more destruction and carelessness of the property (representing major violent crimes in the whole neighborhood). This paper

coins the term Mirrored Windows Theory by reversing the application of Broken Windows Theory and applying it to police officers themselves to examine whether greater prevalence of heavy surveillance policing, which often creates disorder within neighborhoods and among their residents, leads to greater use of force by police officers in New York City. Using panel data, this paper examines whether a greater number of 1) stop-and-frisk incidents that do not involve the use of physical force, 2) more civilian complaints made against police officers alleging inappropriate use of force, or 3) civilian complaints for which police officers are exonerated are associated with the actual use of physical force by police while controlling for underlying neighborhood crime and demographics of each neighborhood, which are defined according to police precincts in NYC. On the basis of Mirrored Windows Theory, these findings will help to inform policies on accountability for police behavior to deter more aggressive and/or violent outcomes, as well as to improve training that aims to increase respect for all communities and ultimately improve police-civilian relations.

This paper proceeds as follows. In the next section, the relevant literature on Broken Windows Theory, which is the theoretical basis of this research, is discussed in terms of how it has been used to inform policing practices in the U.S. and particularly in New York City. In addition, the extant literature is discussed in terms of the implications of street-level bureaucratic implementation of this approach to community policing and how the application of Broken Windows Theory is reversed to the police. The data, model specification, and methodology for testing the application of Mirrored Windows Theory and the primary research question are then discussed. The final sections interpret the regression results and discuss the implications of the findings, including suggested policy reforms for improving community-police relations and achieving social justice going forward.

Broken Windows Theory and Its Role in Informing Policing Practices

A significant shift in policing took place in the 1990s after the introduction of the Broken Windows Theory. Informed by social scientists George Kelling and James Wilson (1982), the Broken Windows Theory stipulates that a building with a broken window (representing minor crimes in a particular area and symbolizing disorder in the community) will inevitably lead to more destruction and carelessness of the property (representing major violent crimes in the whole neighborhood). Through the theory, Kelling and Wilson (1982) identified the potential relationship between disorder and crime, meaning the continued allowance of disorderly acts in public spaces would perpetuate more chaos and fear (Anderson, 2016). In other words, disorder welcomes more severe, and eventually, violent crime; therefore, the quicker that minor crimes or suspicions are addressed, the quicker a precedent is set for reduced tolerance (known as zero-tolerance) for wrongdoing.

Broken Windows Theory initially began informing police practices in the mid 1980's when Kelling was hired by the New York Transit Authority as a consultant, allowing him to push the introduction of the theory, which was adopted by former Commissioner William (Bill) Bratton (Lorenz, 2010; Passavant, 2015) and fully implemented in New York City under former mayor Rudy Giuliani in 1993. Under Giuliani's leadership, when the New York City Police Department (NYPD) implemented its neighborhood policing initiative on the basis of the theory, the department increased by almost 30% over a ten-year period (Albrecht, 2011). During this time, the NYPD's aim was to aggressively enforce minor 'quality of life' offenses (Macdonald & Braga, 2019) as a seemingly effective solution to law enforcement in a time of high crime rates (Albrecht, 2011). This approach also appealed to residents' requests for higher policing of minor crimes (e.g., drinking or vandalism) with the expectation that, in theory, it would reduce crime rates altogether. Supporters of the theory claimed that it was

through the Commissioner's radical review of the NYPD's standing and applied strategies that violent and serious crime saw a decline of more than 80% since 1993 (Albrecht, 2011; Friedersdorf, 2020).

Implementing Broken Windows Theory into Practice

As the underlying approach to NYPD policing and other communities across the nation, law enforcement largely implemented the Broken Windows Theory into practice through 'tough on crime' approaches and the use of stop-and-frisk policing. In 1996, officers were given the authority to make 'pretext stops' which allowed them to stop someone for a particular violation, even when the suspected wrongdoing lay elsewhere. For example, a police officer might stop a person for a minor traffic infraction, yet the true intent was to search the vehicle for drugs (Cooper, 2015). In New York City in particular, it was common for police officers to arrest and charge someone with a misdemeanor when marijuana was found during a stop-and-frisk, even when it became visible only by the search itself (Center for Constitutional Rights, 2012; Harcourt & Ludwig, 2007). During this time, the threshold on what police could do during a stop moved further in the direction of more aggressive new tactics; however, it is important to note that the expansion of this form of bureaucratic discretion (Lipsky, 2010) actually began a couple decades earlier.

In Terry v. Ohio (1968), the court's opinion established that officers could constitutionally conduct stops when they had "reasonable suspicion" that the suspect in question was somehow connected to criminal activity, including a limited search if he or she believed the suspect to be carrying a weapon that could either endanger the officer or the general public (La Vigne et al., 2014). Whereas this was originally designed to be a minimally invasive strategy (Cooper, 2015), subsequent court cases expanded the concept of 'reasonable suspicion' to include factors such as an individual's appearance and behavior, and gave way for officers to confiscate drugs and other illicit substances found during frisks (that would otherwise probably not have been discovered) and enter them as evidence (La Vigne et al., 2014).

Due at least in part to this expanded opportunity for street-level bureaucratic decision-making (Lipsky, 2010), Broken Windows Theory has frequently been implemented in the form of heavy surveillance tactics through the lens of hard crime-fighting as noted above. Through the theory's framework, police officers are able to subjectively identify 'disordered' areas or neighborhoods, and, at their bureaucratic discretion (Lipsky, 2010), utilize heavy surveillance tactics in the form of requesting identification at will, issuing violation documents, and/or making misdemeanor arrests (Stoudt et al., 2019). In addition to stop-and-frisk, heavy surveillance policing includes 'vertical policing', which derived from Operation Safe Housing in 2004 under the leadership of former mayor Michael Bloomberg (Jefferson, 2016). Vertical policing involves police sweeping through lobbies, hallways, courtyards, and rooftops of public and private housing, as well as increasing police presence in schools (Stoudt et al., 2019).

However, such enforcement of low-level offenses often strains police-community relationships and exacerbates mistrust (Eterno et al., 2016), which impairs police effectiveness, legitimacy, and public safety as a whole (Epp et al., 2016; Kearns et al., 2020). Moreover, when the police force does not represent the people that it is charged with protecting, due to a lack of diversity among officers, we often see more discrimination and violent outcomes stemming from police-civilian encounters, thereby further eroding trust (Kennedy et al., 2017; Nicholson-Crotty et al., 2017). When people do not trust the police, they are less likely to cooperate with police (Epp et al., 2016), such as by reporting crimes or

assisting in investigations, resulting in currently less than 40% of victims reporting their experiences to police and less than 25% of offenses solved by an arrest (Neusteter & O'Toole, 2019).

Implications of Broken Windows Theory Implementation

While categories of major violent crime rates in New York City decreased as a result of stop-and-frisk policing, what often went unmeasured was police-induced violence that resulted from heavy surveillance of minor crimes (Harcourt & Ludwig, 2007; Jefferson, 2016). In practice, the implemented patterns of stop-and-frisks have revealed that characteristics such as racial demographics, income levels, and social disorganization are strong predictors of race- and crime-specific stops (Fagan & Davies, 2000). With respect to vertical policing, extant research has also found disproportionate negative implications for Black minors and other minors of color (Fine et al., 2003; Kodelja, 2019; Musheno, 2016). Specifically, the ways in which many community policing strategies were implemented have ultimately led to increased police presence in poor communities and communities of color, often resulting in harsher treatment and stricter punishment for minor crimes (Stoudt et al., 2019). More specifically, youth in minority neighborhoods often feel mistreated by the police (Eterno et al., 2016).

Despite recent calls to decriminalize small amounts of marijuana in public spaces, arrests of this nature continue to disproportionately affect Black and Latino youth, compared to White youth, even though drug use among the latter is often more prevalent (Center for Constitutional Rights, 2012). For instance, the number of NYPD arrests for marijuana in public view (MPV) increased from 3,000 in 1994 to over 50,000 in 2000, and up to about 30,000 by the mid-2000s, with most of the people arrested being ethnic minorities. Blacks were 2.7 times more likely, and Hispanics 1.8 times more likely, to be detained than Whites for an MPV arrest (Harcourt & Ludwig, 2007; Johnson et al., 2008). Moreover, of 685,724 stop-and-frisks conducted (not exclusively MPV), representing a 300% increase from 2003 to 2015, 84% were Black or Latino, 88% of stops involved neither an arrest nor a summons, and stops that did involve the courts were often dismissed (Stoudt et al., 2019). Furthermore, guns were found less than 0.2% of the time despite the NYPD Commissioner being adamant that stop-and-frisks were critical to getting guns off the streets.

The Office of Community Oriented Policing Services, under the U.S. Department of Justice, produced a guide on community policing (2014), which found that minorities experience police stops more negatively than Whites. Among low-income and racial minority community members, stop-and-frisk strategies are now notorious for enhancing community disorder and the threat of police violence towards these communities. Stops often result in excessive police force, including getting slapped, thrown up against walls or onto the ground, beat up, tased, or other physical attacks (Center for Constitutional Rights, 2012). And use of force is more likely to occur when there is racial and gender incongruence between officers and civilians, particularly when encounters occur between Black civilians and White officers (Wright II & Headley, 2020). An analysis from the Prison Policy Initiative showed that in 2011, police used physical force in almost a quarter of stops or 130,000 times (Lenehan, 2017). Of these stops, 23% included Blacks and Latinos compared to 16% of Whites (Lenehan, 2017). And, weapons (mostly knives) were found in only about 1% of the stops involving Blacks and Latinos, while weapons were found on Whites nearly twice as often (Lenehan, 2017). Moreover, "between 2004 and 2012, it took 143 stops of Blacks to lead to

one seizure of contraband, 99 stops of Hispanics to lead to one seizure, and only 27 stops of Whites to lead to one seizure, yet Whites comprised only 10% of all stops" (Passavant, 2015, p. 335).

Though there are limitations in the data analyzed, one major issue that has been observed from stop-and-frisks and arrests is the growing distrust and fear inside the communities that police officers serve. As a result, the term 'broken windows' has become widely scrutinized, and is often attributed to the racial disparities seen in cases of alleged police brutality and arrests (Jefferson, 2016). As such, Kelling recently provided clarification to the original intent of Broken Windows Theory by suggesting that "the police ought to protect communities as well as individuals with proper training and supervision, and most importantly, with a clear sense of limits, for officers to effectively maintain order and prevent crime" (Neklason, 2019). As it relates to the ongoing stories of alleged police brutality in present times, it raises questions on the intersectional effects that Broken Windows-based policing will have long-term, particularly with respect to reinforcing current feelings of civilian mistrust, fear, and/or helplessness.

Development of Mirrored Windows Theory

As police-civilian interactions currently stand, the onus continues to be placed on civilian attitudes and behavior, but it is worth considering how Broken Windows Theory may be applied to law enforcement officers. In his recent article in The Atlantic, Friedersdorf (2020) revisited an argument by attorney Ken White that, by the logic of the Broken Windows Theory, if tolerating broken windows escalates crime, what implication does tolerating the police's own broken windows and misconduct have? We believe this is an important question to ask, because police officers allegedly killed 1,141 civilians by the end of 2021 and 145 in the first few months of 2022 alone (Mapping Police Violence, 2021, 2022). And, while police brutality is primarily recognized in police shootings and abuses of authority, it may also stem from behaviors that create the sense that police officers do not respect the neighborhoods or people they are supposed to protect (Friedersdorf, 2020). As such, Friedersdorf (2020) argued that if police believe aggressive policing of communities is effective, it may be sensible to suggest they be subjected to the same logic if there are multiple broken windows in their own departments.

No known study to date has reversed the application of Broken Windows Theory and used it to evaluate the use of force by police officers. As such, there is no pre-existing theoretical framework or guide to follow for empirical model specification and hypothesis testing. However, the extant research discussed above is useful for informing logic to establish hypotheses. As previously explained, the primary focus of Broken Windows-based policing is on the relationship between disorder and crime such that heavy surveillance tactics and aggressive enforcement to deter minor crimes committed by civilians would reduce disorder, chaos, and more severe or violent crimes within neighborhoods (Anderson, 2016; Kelling & Wilson, 1982). One of the most common applications of heavy surveillance policing, particularly in New York City, has been stop-and-frisk. However, the widespread use and disproportionate implementation of stop-and-frisk policing in racial-minority and low-income neighborhoods might also be seen to create disorder and chaos in the same vein as civilians committing minor crimes.

In this theoretical context, heavy surveillance policing such as stop-and-frisk is viewed as equivalent to minor 'crimes' symbolizing disorder for the neighborhood and its residents. Following the logic of Broken Windows Theory would then suggest a possible connection between such heavy surveillance police tactics and more severe or violent actions taken by

police such as the use of force, which I describe as Mirrored Windows Theory. In this regard, the more frequent use of stop-and-frisk policing (similar to a greater frequency of minor crimes committed by civilians) would result in a greater number of civilian-police interactions, and, to the extent such interactions disproportionately occur within certain neighborhoods or are motivated by targeting certain classes of individuals, would be seen by residents as indicative of a lack of respect for their neighborhood and its people. If this is the case, on the basis of Mirrored Windows Theory, such heavy surveillance police tactics would logically lead to more careless and destructive behaviors of police officers (similar to more violent crimes committed by civilians) such as greater use of physical force during encounters with civilians.

> *H_1: A greater frequency of stop-and-frisk incidents that do not involve the use of physical force within a neighborhood will be positively correlated with the frequency of actual use of physical force by police officers in that neighborhood.*

Thus far, the logic of Mirrored Windows Theory to evaluate the use of force by police officers is based upon the critical assumption that heavy surveillance police tactics are seen as disrespectful and chaotic by neighborhood residents. However, this may not always be the case if stop-and-frisk incidents are valid or warranted, even if the frequencies of such incidents disproportionately accumulate in certain neighborhoods or among certain classes of individuals. As noted above, the widespread implementation of stop-and-frisk policing in New York City in the early 1990s was often met with enthusiasm from residents desiring a reduction in neighborhood crime, which did in fact happen during this time (Albrecht, 2011; Friedersdorf, 2020). And, to the extent that heavy surveillance policing is warranted and does not incite neighborhood disorder, then one would have no reason to believe such police tactics would be related to more aggressive behavior or violent acts committed by police officers. However, the newly released CCRB civilian complaint data can uniquely help with this important assumption regarding the perception of neighborhood residents. With the ability to measure the number of civilian complaints made against police officers within a neighborhood, it is possible to directly determine the extent to which heavy surveillance policing is perceived as unnecessary or excessive and therefore more likely to incite disorder within neighborhoods and ultimately lead to more destructive or violent behaviors by police officers during encounters with civilians. In addition, it is possible to measure civilian complaints for which police officers are exonerated, meaning the complaint was investigated, and it was determined by the CCRB that the alleged misconduct occurred but did not violate NYPD rules. Such cases might also be indicative of disorder potentially leading to more destructive behaviors by police officers, particularly if it is perceived that such misconduct will not result in disciplinary actions against the officers.

> *H_2: A greater frequency of civilian complaints within a neighborhood made against police officers alleging inappropriate use of force will be positively correlated with the frequency of actual use of physical force by police officers in that neighborhood.*

> *H_3: A greater frequency of civilian complaints within a neighborhood for which police officers are exonerated from misconduct will be positively correlated with the frequency of actual use of physical force by police officers in that neighborhood.*

If a connection between the use of heavy surveillance police tactics and more aggressive or violent actions is found, suggesting evidence of Mirrored Windows Theory, then policy prescriptions for advancing social justice may be more effective if focused on the initial civilian-police interaction, perhaps leading to reductions in violent behaviors. This is important in light of research that suggests the scope of authority with respect to police oversight and accountability influences police performance regarding violent crime and line-of-duty homicides with broader scope effectively improving performance (Ali & Nicholson-Crotty, 2021). These changes would, ideally, lead to greater trust and improved police-civilian relations as civilians begin to witness the presence of policing resources that are more focused on civilian and community protection. The next sections offer an empirical test of the Mirrored Windows Theory.

Data

To address the research question of whether heavy surveillance policing is related to the actual use of physical force by police officers within the context of Mirrored Windows Theory, data were obtained from three main sources, which are indicated for each variable summarized in Table 1. First, data were collected directly from the New York Police Department on all stop, question, and frisk incidents, along with data pertaining to the rates of several categories of crimes that are used as neighborhood controls.[1] All of the crime data are reported at the police precinct-level, which is the lowest level of geographical observation available and is therefore how NYC neighborhoods are defined for purposes of analysis. For the stop, question, and frisk data reported at the incident level and used to test the first hypothesis, information pertaining to the police precinct corresponding to the incident location that is provided in these data is used to aggregate the data and determine the total number of stop-and-frisk incidents per NYPD precinct per year. This same process is used to also determine the number of incidents involving the actual use of physical force (including the officer's use of hands, pushing the suspect against a wall, pushing the suspect onto the ground, drawing a weapon, pointing a weapon, using a baton, using handcuffs, using pepper spray, and other) per NYPD precinct per year.

Second, data were obtained pertaining to all civilian complaints made against NYPD police officers that were investigated by the New York City Civilian Complaint Review Board (CCRB), which is the independent, civilian oversight agency charged with receiving, investigating, mediating, hearing, finding, and making recommendations to the NYPD police commissioner regarding complaints of excessive/unnecessary use of force, abuse of authority, discourtesy, and/or use of offensive language.[2] Again, these data only became publicly available in June 2020 when a judge lifted an order related to a NYPD union-backed lawsuit that had previously prohibited the New York Civil Liberties Union from doing so (Durkin, 2020). These data are used to measure the aggregate number of civilian complaints alleging excessive/unnecessary use of physical force made against police officers per NYPD precinct per year to test the second hypothesis. It is important to keep in mind that these complaint data include all civilian-police encounters and is not necessarily limited to stop-and-frisk incidents.

[1] Additional information on publicly available NYPD data can be found here: https://www1.nyc.gov/site/nypd/index.page.

[2] It should be noted that the CCRB data uniquely contain complaints made against police officers, which differ from criminal complaints made against civilians that are reported to the NYPD. Additional information on the CCRB can be found here: https://www1.nyc.gov/site/ccrb/index.page.

Finally, demographic information is incorporated to control for underlying neighborhood characteristics, which were obtained from the U.S. Census Bureau. However, these data are not reported or available at the NYPD police precinct-level. So, ArcMap Geographical Information Software (GIS) was used to estimate the demographics of each police precinct each year. To do so, the NYPD police precincts were mapped using a publicly available shape file and then the 2010 U.S. Census blocks shape file for New York City was overlaid to identify the NYPD police precinct in which each Census block is located. While U.S. Census block boundaries are not necessarily coterminous with NYPD police precinct boundaries, this is the lowest geographical level available for acquiring demographic data. Since Census blocks are geographically much smaller than NYPD police precincts, most of the Census blocks fall entirely within a single police precinct. For those Census blocks that span across more than one police precinct, the first precinct found by ArcMap was used. With the corresponding police precinct for each Census block identified, raw counts of demographic information were collected on an annual basis using 5-year estimates from the U.S. Census Bureau, and then the block-level data were aggregated to precinct-level by summing the numbers. This provides for an estimation of the demographics of each NYPD precinct each year.

Due to limits on data availability and, more importantly, comparability across police precincts and over time[3], these three data sources provide a panel of data for all 76 precincts in years 2009–2012 and all 77 precincts in years 2013–2016.[4] However, the panel represents population data (not a sample) for the time period analyzed. NYPD police precincts are used to represent NYC neighborhoods each year 2009–2016.

Figure 1 illustrates the trends over this time period of all stop-and-frisk incidents, those incidents involving the use of physical force (both on the left-hand axis), and the total number of civilian complaints alleging inappropriate use of force (on the right-hand access). A few interesting trends in Figure 1 are worth noting. First, the trend lines pertaining to the total number of stop-and-frisk incidents and the number of incidents involving the actual use of physical force appear to follow a very similar pattern, albeit the numbers of physical-force-incidents are much lower. This clearly indicates that far less than 100% of stop-and-frisk incidents devolve into a situation in which physical force is used by police officers. And, this is also evidenced by the need to place the total number of civilian complaints alleging the use of physical force, from civilians who felt the forced used during an encounter with police was inappropriate or excessive, on its own axis since the numbers observed are much lower in total. Again, this suggests that, by comparison, relatively few civilian-police encounters result in civilian complaints of inappropriate use of force.

Figure 1 also shows a stark contrast in trends pertaining to incidents versus complaints. As can be seen, the numbers of stop-and-frisk incidents and those involving actual physical force both begin to decline precipitously in 2011 as there is a clear policy change during this time regarding this particular form of policing. Regardless, however, after a modest decline between 2011 and 2012, the number of civilian complaints alleging excessive physical force used by police officers steadily increases throughout the remainder of the time period. Again, it is important to keep in mind that these complaints include all civilian-police encounters and

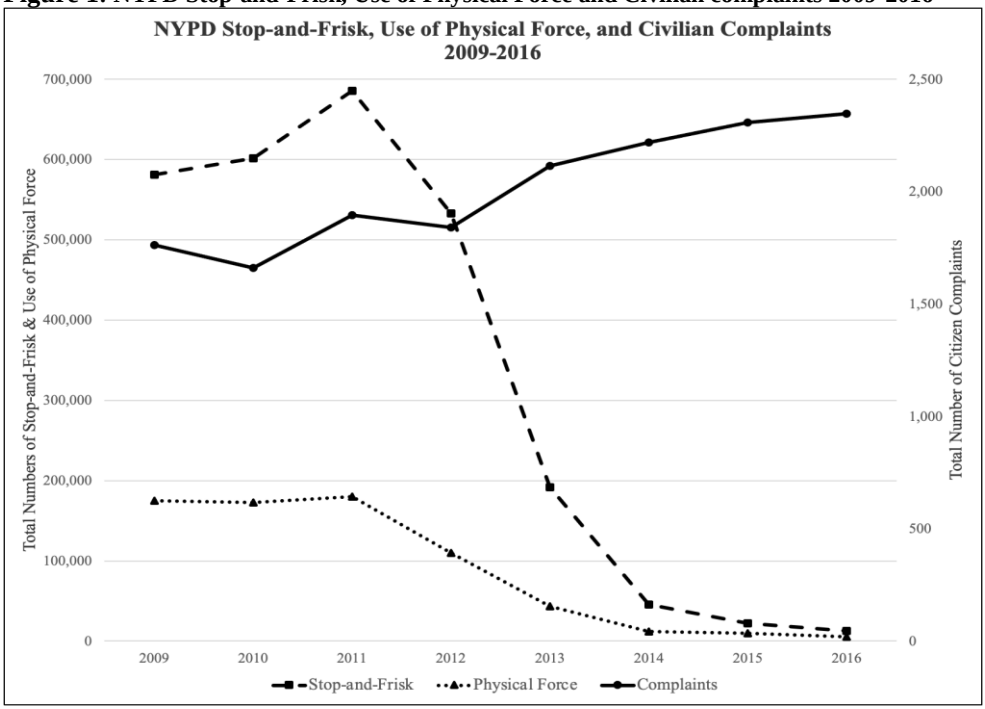
[3] The stop, question, and frisk data are available dating back to 2003; however, the way in which the information is reported in these annual datasets changes over time. The time period selected for analysis is the longest possible while ensuring these variables reflect the same comparable information each year.

[4] Although the numerical descriptions of NYPD police precincts range from 1 to 123, this panel represents the population of NYPD police precincts during the time period. For additional information: https://www1.nyc.gov/site/nypd/bureaus/patrol/find-your-precinct.page.

Table 1: Variable Descriptions & Data Sources

Variable	Description & Data Source
Dependent Variable	
Physical Force	Total number of stop-and-frisk incidents per NYPD precinct per year involving the use of physical force, including: use of hands, pushing suspect against a wall, pushing suspect onto the ground, drawing a weapon, pointing a weapon, using a baton, using handcuffs, using pepper spray, and other. Source: New York City Police Department.
Heavy Surveillance Policing	
Other Stop-and-Frisks	Total number of stop-and-frisk incidents that did not involve the use of physical force per NYPD precinct per year. Source: New York City Police Department.
Civilian Complaints	Total number of civilian complaints alleging use of physical force made against officers per NYPD precinct per year. Source: New York City Civilian Complaint Review Board.
Exonerated Complaint Dispositions	Total number of civilian complaints made against officers in which the CCRB determined that the alleged misconduct occurred but did not violate NYPD rules per NYPD precinct per year. Source: New York City Civilian Complaint Review Board.
Underlying Neighborhood Crime	
Criminal Trespassings	Total number of criminal trespassings per NYPD precinct per year. Source: New York City Police Department.
Misdemeanor Possessions Stolen Goods	Total number of misdemeanor offenses involving possession of stolen goods per NYPD precinct per year. Source: New York City Police Department.
Aggravated Harassments	Total number of misdemeanor aggravated harassment offenses per NYPD precinct per year. Source: New York City Police Department.
Burglaries	Total number of burglary offenses per NYPD precinct per year. Source: New York City Police Department.
Underlying Neighborhood Demographics	
Minority Population	GIS-estimated percentage of non-White population served per NYPD precinct per year. Source: U.S. Census Bureau.
Bachelor's Degree	GIS-estimated percentage of population with a Bachelor's degree served per NYPD precinct per year. Source: U.S. Census Bureau.
Low Poverty	GIS-estimated percentage of population with a ratio of income to poverty level in the past 12 months of less than 100% per NYPD precinct per year. Source: U.S. Census Bureau.
Total Population	GIS-estimated total population served per NYPD precinct per year. Source: U.S. Census Bureau.

Figure 1: NYPD Stop-and-Frisk, Use of Physical Force and Civilian complaints 2009-2016



not just stop-and-frisk incidents. A possible explanation for this trend is that civilians became less fearful of reporting police misconduct. On the other hand, it might also be the case that civilian complaints became more frivolous as a result of efforts of advocacy groups, legal representatives, or increased national attention to police-civilian relations. As such, this question warrants further investigation. The next section describes the econometric model specification and estimation approach.

Model Specification & Methodology

Mirrored Windows Theory applied to the NYPD would suggest that a greater prevalence of heavy surveillance tactics used by police officers, to the extent they create disorder for the neighborhood and its residents, will lead to more aggressive or violent acts by police as their lesser wrongdoings go unchecked (Friedersdorf, 2020). On this theoretical basis, the prevalence of stop-and-frisk incidents involving the actual use of physical force (PF) is estimated as a function of heavy surveillance policing (HS), underlying crime rates of the neighborhoods (NYPD precincts) within which incidents occur (CR), and underlying demographic characteristics of the neighborhoods (NC) as specified in Equation 1.

$$PF\_it=\alpha+HS\_it\,\beta\_1+CR\_it\,\beta\_2+NC\_it\,\beta\_3+\varepsilon\_it \qquad (1)$$

In equation 1, PFit is the aggregate number of stop-and-frisk incidents per NYPD precinct per year involving the actual use of physical force, including: officers' use of hands, pushing a suspect against a wall, pushing a suspect onto the ground, drawing a weapon, pointing a weapon, using a baton, using handcuffs, using pepper spray, and other. The vector

HSit contains the independent variables of greatest interest, which include: 1) the total number of stop-and-frisk incidents that did not involve the use of physical force per NYPD precinct per year, 2) the aggregate number of civilian complaints alleging use of physical force by police officers per NYPD precinct per year, and 3) the total number of civilian complaints made against officers in which the CCRB determined that the alleged misconduct occurred but did not violate NYPD rules per NYPD precinct per year. As previously explained, each of these variables serve as indicators of heavy surveillance policing that potentially creates disorder for the corresponding neighborhoods (NYPD precincts) and civilians living within them. Based upon the previously stated hypotheses, it is expected that the results will reveal positive correlations between each of these independent variables and the dependent variable of the numbers of stop-and-frisk incidents involving the actual use of physical force.

The final two vectors in Equation 1 include variables to control for underlying crime rates of the neighborhoods (NYPD precincts) within which incidents occur (CRit) and underlying demographic characteristics of the neighborhoods (NC_{it}).[5] In spite of efforts to make police departments more racially and ethnically representative of the communities being policed (Hong, 2017), it is important to control for these underlying trends as they might influence police officers' perceptions of a particular neighborhood, particularly related to their level of respect for the area and its residents, which may motivate officers to use more aggressive police tactics during encounters with civilians in these neighborhoods. Specifically, measures are included for underlying crime that might be considered more of a nuisance by requiring police response (e.g., criminal trespassing and misdemeanor possession of stolen goods), as well as more serious crimes against persons and property that are committed by civilians (e.g., aggravated harassments and burglaries) and therefore create broken windows within the neighborhood outside of any police activity. All of these count variables are reported at the police precinct-level each year. In addition, typical demographic controls are included, which were estimated at the police precinct-level using the GIS process explained earlier, to measure the percentage of residents within each neighborhood each year who possess these characteristics (e.g., race, education, and poverty).

Since the dependent variable of the number of stop-and-frisk incidents involving the actual use of physical force by police officers is a nonnegative count variable, using linear regression for model estimation would likely produce inefficient, inconsistent, and biased estimates (Long, 1997). In addition, the data comprise a panel and do not contain observations of zero in the dependent variable. However, to address overdispersion, Equation 1 is estimated using Conditional Fixed Effects Negative Binomial regression for panel data with observed information matrix (OIM) standard errors.

Empirical Results

Table 2 provides descriptive statistics for all variables used in the analysis. Since the dependent variable is a nonnegative count variable, the counts of most independent variables (except for underlying neighborhood demographics) were also used, as opposed to

[5] It should be noted that all other available crime categories were also tested, including: violations, misdemeanors, shootings, and felonies. In addition, additional variables operationalizing neighborhood characteristics were tested, including additional racial breakdowns of the neighborhoods. However, many of these variables are correlated with each other, and many failed to reach statistical significance in the regression model. So, these vectors in Equation 1 include the most comprehensive set of variables possible while also ensuring that multicollinearity is not biasing the regression results.

standardizing them as percentages, for more parsimonious interpretation of the regression results.[6] As such, total population was also included as a control variable to account for the uneven variation in the size of neighborhood precinct areas. As a reminder, all variables are observed at the police precinct level each year 2009–2016.

As shown in Table 2, stop-and-frisk incidents involving police officers' actual use of physical force occur 1,157 times, on average, per NYPD police precinct per year. This number varies from a minimum of only 4 incidents in precinct number 22 in 2016 involving physical force to 10,874 incidents within neighborhood precinct number 44 in 2010, which was near the peak of stop-and-frisk policing policy in New York City. On average, NYPD officers made 3,212 stops that did not involve the use of physical force per precinct per year during the time period, which ranged from a low of zero stops in precincts 18 in 2015 and 100 in 2016 to a high of 27,338 stops in precinct number 75 in 2009.

On the upside, the average number of civilian complaints alleging police officers' inappropriate use of physical force, which covers all civilian-police encounters and is not necessarily limited to stop-and-frisk incidents, is only six times per precinct per year. And, while precinct number 75 had the most civilian complaints of excessive use of force in 2012 at 52, several precincts had zero complaints made by civilians against police officers alleging inappropriate use of physical force. Although not shown, 42 NYPD police precincts observed in the dataset had zero use of force complaints made against officers, and several of these had zero complaints in more than one year. During the whole time period (2009–2016) those neighborhood precincts with zero civilian complaints for the most years were numbers 22 (7 years), 26 (6 years), and 111 (7 years). Moreover, in terms of civilian complaints in which police officers are exonerated, it occurs 6 times, on average, per precinct per year. However, police officers in precinct 75 were exonerated from 59 civilian complaints in 2011, thereby showing a nontrivial number of civilian complaints are found by the CCRB to be unwarranted.

The remainder of the variables in Table 2 are control variables used to account for underlying crime trends of NYC neighborhood precinct areas and demographic characteristics of residents living in these areas.

Table 3 provides the Conditional Fixed Effects Negative Binomial regression results. Overall, the model is statistically significant at the 99 percent confidence level (Wald Chi-Square=1,677.43; Prob>Chi-Square=0.0000). All of the independent variables are statistically significant at the 95 percent confidence level or above. In Table 3, the columns labeled as #3 and #4 provide the original regression coefficients and z-values, respectively, with asterisks on the latter indicating significance levels. Column #5 provides the standard deviation discrete changes, the calculations of which are based upon the differenced mean

[6] As can be seen by the mean and standard deviation values in Table 2, the distributions of some of the count variables included in the regression model are skewed due to the presence of outliers in the data. Of course, a common approach for addressing such skewness is to standardize the data into ratios or transform the data into natural log form. However, standardizing does not eliminate the skew, and logging the variables would result in a loss of at least 93 out of 612 (15.2%) observations. While it is common practice in econometrics to add a value of one to variables before logging them to avoid losing observations with a value of zero, adding a value of one to the variables measuring civilian complaints and exonerated complaint dispositions (two of the three independent variables of greatest interest), which both have means of six and standard deviations of seven, would introduce a nontrivial amount of measurement error to these variables. However, to ensure the robustness of the regression results, Equation 1 was also estimated by excluding the 27 observations with dependent variable values of more than two standard deviations above the mean, and the results (available from the author upon request) were substantively unchanged. As such, while the data analyzed represent population data (not a sample), the regression coefficients presented herein might reflect less precision than without such skewness, which is a limitation of this study.

and standard deviation values provided in columns #1 and #2, respectively, as a way to interpret the regression coefficients (Long, 1997) with all values in column #5 reported in percentage terms.[7]

Table 2: Descriptive Statistics

Variable	Mean	Standard Deviation	Minimum	Maximum
Dependent Variable				
Physical Force	1,157	1,603	4	10,874
Heavy Surveillance Policing				
Other Stop-and-Frisks	3,212	3,931	0	27,338
Civilian Complaints	6	7	0	52
Exonerated Complaint Dispositions	6	7	0	59
Underlying Neighborhood Crime				
Criminal Trespassings	203	224	0	1,802
Misdemeanor Possessions Stolen Goods	26	20	0	133
Aggravated Harassments	334	164	1	998
Burglaries	226	114	1	657
Underlying Neighborhood Demographics				
Minority Population	45.54%	15.74%	10.16%	83.50%
Bachelor's Degree	18.69%	4.94%	8.62%	34.64%
Low Poverty	18.44%	5.96%	5.32%	34.21%
Total Population	1,343,977	1,110,056	49,839	5,771,638

Note: N = 612 (t=8; i = 76 for years 2009-2012 & i = 77 for years 2013-2016)

The results in column #5 are interpreted as: For an increase of one standard deviation from its mean of the independent variable of interest, the expected count in the dependent variable increases/decreases by X%, holding all other variables constant. This interpretation approach considers changes in each independent variable relative to how each variable is measured and at levels that are likely to actually occur, while also accounting for the variation in scaling of the independent variables (e.g., civilian complaint counts vs. total population vs. percentage with a bachelor's degree). As such, this approach reflects change values in the independent variables that provides for strict comparison of the regression coefficients in terms of magnitude of impact.

The regression results presented in Table 3 undoubtedly support the notion of the

[7] Since the data are differenced during model estimation, it is important to base the interpretations of the regression coefficients on the differenced means and standard deviations, as opposed to the original values reported in Table 2, to avoid overestimating the magnitude of impact. This is especially imperative considering the nonstationary downward trend over time in the frequencies of stop-and-frisk incidents (see Figure 1) as a reflection of the NYPD's policy change in 2011, as well as declining crime trends during the time period of this study. These downward trends are evident in the differenced mean calculations, as several values in Table 3 are negative.

Mirrored Windows Theory, which is the term coined herein to describe the reverse application of Broken Windows Theory as suggested by Friedersdorf (2020) and empirically tested in this analysis. Specifically, as the aggregate number of stop-and-frisks that do not involve the use of physical force increases one standard deviation from its mean (n=1,407) in a single precinct in a single year, one can expect the number of stop-and-frisk incidents involving police officers' actual use of physical force to increase by 17% per neighborhood precinct per year on average, which is the highest magnitude of all variables used for analysis. And, as the number of civilian complaints resulting in police officers being exonerated by the CCRB increases one standard deviation from its mean (n=5), one can expect the number of stop-and-frisk incidents involving police officers' actual use of physical force to increase by 6.42% per neighborhood precinct per year on average. On the other hand, as the number of civilian complaints alleging the use of inappropriate physical force by police officers increases by one standard deviation from its mean (n=5) per police precinct per year on average, one can expect a decrease in actual physical force used by police officers during stop-and-frisk incidents of 4.84% per neighborhood precinct per year on average. This latter finding is opposite of expectations and the stated hypothesis, thus might be more indicative of civilian oversight of police officers rather than perceptions of inappropriate behaviors. As such, this finding suggests that civilian complaints potentially provide broad accountability that serves to improve police performance like what has been found in recent research (Ali & Nicholson-Crotty, 2021).

Table 3: Conditional Fixed Effects[1] Negative Binomial Regression Results of NYPD Use of Physical Force

	1	2	3	4	5
Variable	**Differenced Mean**	**Differenced Standard Deviation**	**Coefficient**	**z**	**Standard Deviation Discrete Changes**
Heavy Surveillance Policing					
Other Stop-and-Frisks	-619.04	2025.78	0.0001116	16.31***	17.00%
Civilian Complaints	0.11	5.07	-0.0095843	-1.97**	-4.84%
Exonerated Complaint Dispositions	0.01	5.30	0.0117092	2.27**	6.42%
Underlying Neighborhood Crime					
Criminal Trespassings	-14.70	101.12	0.0005811	3.70***	5.15%
Misdemeanor Possessions Stolen Goods	-1.46	15.31	0.0060184	4.10***	8.69%
Aggravated Harassments	-16.46	55.88	0.0026071	8.44***	10.82%
Burglaries	-0.06	0.20	0.0015463	3.51***	0.02%
Underlying Neighborhood Demographics					
Minority Population	37.87%	148.31%	-0.0459306	-10.66***	-8.20%
Bachelor's Degree	29.70%	73.34%	-0.0786888	-5.69***	-7.79%
Low Poverty	19.25%	84.46%	-0.0769943	-6.94***	-7.67%
Total Population	15,963	58,237	-0.0000002	-3.31***	-1.51%

*** p < 0.01; ** p < 0.05; * p < 0.10

Wald Chi-Square = 1,677.43; Prob > Chi-Square = 0.0000; AIC = 7,493.51; BIC = 7,546.511
[1] Fixed effects reflect police precincts.

It is important to keep in mind that these findings are robust even while controlling for underlying crime rates and demographics in these neighborhood precincts each year. However, it is important to reiterate the caveat that the use of stop-and-frisk as a policy approach to community policing has nearly been abandoned by the NYPD, and the numbers of stop-and-frisk incidents have precipitously declined since 2011 (see Figure 1). Still, this punctuated change in policing policy in NYC only occurred within the past decade, and other police departments across the nation have not necessarily followed suit.

In terms of underlying neighborhood crime, Table 3 shows that the broken windows-related crimes against persons and properties of criminal trespassing, possession of stolen goods, aggravated harassments, and burglaries are all positively correlated with police officers' use of physical force. Specifically, as the number of criminal trespassings increases one standard deviation from its mean (n=86) per precinct per year, the likelihood of police officers using physical force during stop-and-frisk incidents increases by 5.15% on average. A one-standard deviation increase from its mean of misdemeanor possessions of stolen goods (n=14) is associated with an 8.69% increase in police officers' use of physical force during stop-and frisk incidents. Moreover, as the rate of aggravated harassments increases one standard deviation from its mean (n=39) per precinct per year, the likelihood of officers using physical force during stop-and-frisk incidents increases by 10.82% per precinct per year on average, which is the second highest magnitude of all variables used for analysis.

Finally, Table 3 reveals both some expected and unexpected findings pertaining to underlying neighborhood demographics and police officers' use of physical force. In a nutshell, race and income matter. According to column #5, as neighborhood precincts become less stricken with poverty and more educated with bachelors' degrees, the likelihood of police officers using physical force during stop-and-frisk incidents declines by 7.67% and 7.79%, respectively, on average. Taken together, these findings are consistent with earlier studies indicating stop-and-frisk practices are motivated at least to some extent by socioeconomic conditions (Fagan & Davies, 2000). So, future research examining the prevalence of police officers' use of physical force at the incident level of observation might shed further light on these related poverty and education questions.

Unexpectedly, however, Table 3 shows that as the GIS-estimated percentage of non-White population in a neighborhood precinct increases one standard deviation from its mean, the likelihood of police officers using physical force during stop-and-frisk incidents actually decreases by 8.2% per precinct per year on average. Perhaps this is a reflection of the NYPD's policy shift away from stop-and-frisk policing and more dedicated efforts to incorporate racial bias awareness into their training programs. On the other hand, this finding might also suggest that NYPD officers are policing the civilian-induced broken windows in White neighborhoods much more aggressively. Again, future research examining the prevalence of police officers' use of physical force at the incident level of observation might shed further light on this race question.

Discussion & Policy Recommendations

It should be noted that a 2013 federal ruling found that New York's aggressive use of stop-and-frisk policing was racially discriminatory. Once the NYPD shifted away from stop-and-frisk as a heavy surveillance policing tactic, stops in the city dropped from averaging over half a million stops a year to under 50,000 (Kramer & Remster, 2018). During this time, NYPD also revised its training to promote more civil and less confrontational conduct during

stops in efforts to reduce any observed racial disparities in police use of force (Kramer & Remster, 2018). However, what must not be lost in these conversations intended to offer evidence-based, practical, achievable policy solutions to this systemic problem of civilian-police relations is the recurring narrative that, in recent times, a majority of police officers feel less safe in the field (Ramirez et al., 2019). Consequently, conversations going forward must address the pattern of mistrust and perception of safety on both sides of this divide.

To that end, civilians' attitudes and perspectives of the police, and certainly their willingness to cooperate with police, tend to directly relate to their level of trust (or lack thereof) and the extent to which they see law enforcement in their community as legitimate. And, police actions that are seen by civilians as unwarranted and/or racially motivated and perhaps leading to greater civilian complaints (see Figure 1), lack of disciplinary accountability (not the focus of this study), or other policing tactics that suggest low social investment in the community (White & Kane, 2013) are indicative of Mirrored Windows perpetuating community disorder. Minimizing the negative effects of heavy surveillance policing (such as stop-and-frisk) is crucial, not only for improving police effectiveness, but especially important for improving relations with communities of color (La Vigne et al., 2014).

Although there is no easy or one-stop solution to this inherently complex issue of police-civilian relations, the following policy recommendations are offered as an initial effort to begin to repair some of the windows that have—figuratively and literally—been broken or mirrored most recently. First, as it relates to applying Broken Windows Theory to the police, which is termed Mirrored Windows Theory for purposes of this analysis, deterring more aggressive interactions with police might require focusing more on the heavy surveillance tactics undertaken by police that incite disorder and disrespect of communities, particularly those in which ethnic minorities and lower-income civilians reside. While not the focus of this study, an important step is to deconstruct the initial reasoning for any encounter between police and civilians, particularly since arrests occur in less than 7% of stops. And, this might require addressing police culture as a whole.

Better training can help clarify when and under what circumstances stops are appropriate, legal, and well-justified (La Vigne et al., 2014), which may help to reduce the need for discretionary street-level decision-making (Lipsky, 2010), as well as promote greater accountability in adhering to procedures and in providing detailed documentation of reasoning and context for civilian-police encounters. A major part of this training reform should include addressing the way in which varying cultural mannerisms are perceived through a law enforcement lens, which has proven problematic to people who do not conform to white middle class modes of expression (Jefferson, 2016). Revisiting the ways in which race and income levels are interpreted in relation to inherent criminality may open deeper conversations between structural inequality and crime (Jefferson, 2016), and ideally lead to reimagined approaches to community policing.

Although Friedersdorf (2020) called for the police to police themselves, in the same way that civilians would not be entrusted to hold each other accountable against engaging in petty crimes and other conduct that creates community disorder, it may also not be realistic to suggest the police hold themselves accountable. For example, a major survey of police officers on how misconduct is tolerated found that 52% believe "it is not unusual for a police officer to turn a blind eye to improper conduct by other officers," and 61% of survey respondents believe the police "do not always report even serious criminal violations that involve the abuse of authority by fellow officers" (Friedersdorf, 2020). In addition, the NYPD has experienced a persistent cycle of misconduct, scandal, and reform for decades (White &

Kane, 2013), continuing to leave academics and practitioners alike anticipating which policy or set of policies will prove to be both feasible and effective.

The culture of law enforcement starts during an officer's training and persists throughout his or her career, which may include the perspective that everyone outside of policing is the enemy (Johnson & Cox, 2004), and often becomes reinforced by the limited contact (outside of police patrol duties) with the communities that police officers serve. So, unlearning the inherent criminality of civilians may be key (Bornstein et al., 2012). Kelling and Wilson (1982) called for protection of the community and the individual, so it is logical to wonder what influence the perspective of going into a community assuming its residents are inherently criminal has on unwarranted use of force and other aggressive police tactics. Especially since it is known that not all communities are policed equally, if unwarranted tactics and/or unnecessary use of force go unchecked, then we are likely to continue to see disorder and violence within our communities, as per the Mirrored Windows Theory and the empirical test provided in this study.

Second, stemming from a concept first discussed in 2006, mandatory professional liability insurance for officers is a model that is perhaps worth revisiting. In the same way that doctors and lawyers are required to have it, this model offers a pathway to accountability due to a series of bureaucratic avenues such as the Civil Service System, the courts, decertification, civilian oversight, and even the use of body cameras, consistently falling short (Ramirez et al., 2019). Critics of this model can rest assured that the stage at which it seeks to intervene begins long before officers are met with critical, on-duty dilemmas, having already priced out officers with demonstrated histories of racial bias or poor performance (Ramirez et al., 2019). Justified use-of-force incidents would not raise premiums, as risk of liability is only assessed based on civil-rights violations, so this approach does not call for more or less policing, but rather, smarter policing (Ramirez et al., 2019). This could greatly reduce the number of unnecessary interactions that police have with civilians, as the results of this study show such encounters increase the likelihood of more forceful outcomes. In the end, broken windows-based policing can work, but we cannot ignore Mirrored Windows that also create community disorder. One promising example is the Orlando, Florida Police Department's (2020) recently created Community Oriented Policing Teams, which are intended to focus on fostering positive interactions with residents. Rebuilding community trust throughout our communities must begin with greater training and accountability, and not necessarily with greater police presence in the streets.

Limitations

An obvious limitation of this study is that its scope only covers a single city. While population data were used to analyze the longest time period possible, the results might not generalize to all other cities. This single-city approach is appropriate and typical for the type of analysis conducted and presented herein; however, the extent to which the findings from this study are generalizable to other cities depends upon the reader's consideration of the extent to which NYPD police officers and the civilians they serve are representative of that which exist in other cities. However, established in 1845, the NYPD is the largest and one of the oldest municipal police departments in the U.S. and often serves as a leader in policing policy that other jurisdictions seek to emulate. So, lessons can certainly be drawn from the findings of this study and adapted to local policing jurisdictions throughout the nation.

Second, extant research has noted that in empirical analyses utilizing police data, researchers must be cognizant of the fact that the data collected in itself likely has a degree of self-selection bias. Specifically, civilian-police interactions are only observed and

measured once a civilian is stopped by police, as opposed to just merely observed; therefore, police data only contain actual interactions that trigger a reporting requirement (Knox et al., 2020). In this analysis, an attempt was made to overcome this selection bias by focusing on the neighborhood level as opposed to the incident level. At the neighborhood level of observation, there are observations of zero in the variables measuring other stop-and-frisks, civilian complaints alleging inappropriate use of force, and exonerated complaint dispositions, which are the primary independent variables of interest. Still, this level of observation clearly obfuscates some underlying factors that would perhaps be more clearly indicated with an incident level of analysis, such as demographic characteristics observed at the neighborhood level rather than incident-level. Even without the presence of selection bias, however, the mere existence of racial disparities may not necessarily prove intent. A disproportionate impact on minorities does not automatically mean that the NYPD has engaged in premeditated and engrained racial discrimination (Harcourt & Ludwig, 2007). So, future research should continue working toward overcoming such selection bias in order to further shed light on this important policy and societal issue.

Policy Implications

The policy recommendations discussed above include the need for more comprehensive training, as well as professional liability insurance for police officers, which are recommended on the same basis as that required of doctors and attorneys: because of the grave consequences to human quality of life if negligence ensues. Again, the NYPD is the largest and one of the oldest municipal police forces with approximately 36,000 sworn officers, 19,000 civilian staff, and serving a population of over 8 million people (City of New York, 2020; Nussbaum, 2012; Reeves, 2011). As one of the most recognizable law enforcement agencies in the world and highly reveled for their 'quality of life' policing strategies, there are major national policy implications for a department of such status to be a leader in reforming their approach to policing. In the same way that quality of life policing once gained the NYPD great credibility and respect world-wide (Johnson et al., 2010), the NYPD can do the same in piloting reform efforts that offer true systemic changes that have impacted minority communities for a long time.

Directions for Future Research

The implication of unchecked Mirrored Windows is three-fold: It is conducive to police officers' own increased use of force and violence, it impairs effectiveness of public safety through civilian mistrust, and it has the potential to alienate people (particularly minority youth) leading to further civilian misconduct in the future (La Vigne et al., 2014). This longstanding and complex issue may call for future research to study the generational effects that mistrust in illegitimately perceived police forces will have on the decay of urban communities. Do numbers in brutality and lethal outcomes continue to rise indefinitely? Do communities begin to adopt means of their own protection against the police? Certainly, many important questions remain.

Author's Biography

Deborah A. Carroll, is Director of the Government Finance Research Center and Associate Professor of Public Administration in the College of Urban Planning and Public Affairs at the University of Illinois Chicago. She also serves as Editor-in-Chief of the Journal of Public and Nonprofit Affairs, which focuses on providing a connection between the practice and research of public affairs.

References

Albrecht, J. 2011. "The NYPD Success Story: Crime Reduction and Narcotics Enforcement." *Pakistan Journal of Criminology 3*(2), 83–94.

Ali. M. U., & Nicholson-Crotty, S. 2021. "Examining the Accountability-Performance Link: The Case of Citizen Oversight of Police." *Public Performance and Management Review 44*(3), 523-559.

Anderson, B. C. 2016. "The Next Urban Crisis." *Society 53*, 510–515. DOI: 10.1007/s12115-016-0058-9

Bornstein, A., Charles, S., Domingo, J., & Solis, C. 2012. "Critical Race Theory Meets the NYPD: An Assessment of Anti-Racist Pedagogy for Police in New York City." *Journal of Criminal Justice Educatio*n *23*(2), 174–204. DOI: 10.1080/10511253.2011.604340

Center for Constitutional Rights. 2012. *Stop and Frisk: The Human Impact*. https://ccrjustice.org/sites/default/files/attach/2015/08/the-human-impact-report.pdf

City of Orlando. 2020, September 30. *Orlando Mayor Buddy Dyer announces Community Trust & Equity Initiative*. https://www.orlando.gov/News/Press-Releases/2020-Press-Releases/Orlando-Mayor-Buddy-Dyer-Announces-Community-Trust-Equity-Initiative

Cooper, H. L. 2015. "War on Drugs Policing and Police Brutality." *Substance Use & Misuse 50*(8–9), 1188–1194. DOI: 10.3109/10826084.2015.1007669

Durkin, E. (2020, August 26). NYCLU publishes more than 300,000 NYPD misconduct complaints after judge's ruling. *Politico*. https://www.politico.com/news/2020/08/26/nyclu-publishes-more-than-300-000-nypd-misconduct-complaints-after-judges-ruling-402885

Edwards, F., Lee, H., & Esposito, M. 2019. "Risk of Being Killed by Police Use of Force in the United States by Age, Race–Ethnicity, and Sex." *Proceedings of the National Academy of Sciences of the United States of America 116*(34), 16793–16798. DOI: 10.1073/pnas.1821204116

Epp, C. R., Maynard-Moody, S., & Haider-Markel, D. 2016. "Beyond Profiling: The Institutional Sources of Racial Disparities in Policing." *Public Administration Review 77*(2), 168-178.

Eterno, J. A., Barrow, C. S., & Silverman, E. B. 2016. "Forcible Stops: Police and Citizens Speak Out." *Public Administration Review 77*(2), 181-192.

Fagan, J., & Davies, G. 2000. "Street Stops and Broken Windows: Terry, Race, and Disorder in New York City." *Fordham Urban Law Journal 28*(2), 457–504.

Fine, M., Freudenberg, N., Payne, Y., Perkins, T., Smith, K., & Wanzer, K. 2003. "Anything Can Happen with Police Around: Urban Youth Evaluate Strategies of Surveillance in Public Places." *Journal of Social Issues 59*(1), 141–158. https://doi.org/10.1111/1540-4560.t01-1-00009

Friedersdorf, C. 2020, June 19. "Apply Broken-Windows Theory to the Police." *The Atlantic*. https://www.theatlantic.com/ideas/archive/2020/06/apply-broken-windows-theory-police/613186/

Fryer, G. 2019. "An Empirical Analysis of Racial Differences in Police Use of Force." *Journal of Political Economy 127*(3), 1-56.

Harcourt, B. E., & Ludwig, J. 2007. "Reefer Madness: Broken Windows Policing and Misdemeanor Marijuana Arrests in New York City, 1989-2000." *Criminology & Public Policy* 6 165–181. DOI: 10.1111/j.1745-9133.2007.00427.x

Hong, S. 2017. "Black in Blue: Racial Profiling and Representative Bureaucracy in Policing Revisited." *Journal of Public Administration Research and Theory 27*(4), 547–561. DOI: 10.1093/jpart/mux012

Jefferson, B. J. 2016. Broken Windows Policing and Constructions of Space and Crime: Flatbush, Brooklyn." *Antipode 48*(5), 1270–1291. https://doi.org/10.1111/anti.12240

Johnson, T., & Cox, R. 2004. "Police Ethics: Organizational Implications." *Public Integrity 7*(1), 67–79. DOI: 10.1080/10999922.2004.11051270

Johnson, B., Golub, A., Dunlap, E., & Sifaneck, S. J. 2008. "An Analysis of Alternatives to New York City's Current Marijuana Arrest and Detention Policy." *Policing: An International Journal* 31(2), 226–250. DOI: 10.1108/13639510810878703

Johnson, B., Golub, A., McCabeb, J. 2010. "The International Implications of Quality-of-Life Policing as Practiced in New York City." *Police Practice and Research 11*(1), 17–29. DOI: 10.1080/15614260802586368

Jones, A., & Sawyer, W. 2020. "Not Just "a Few Bad Apples": U.S. Police Kill Civilians at Much Higher Rates than Other Countries." *Prison Policy Initiative*. https://www.prisonpolicy.org/blog/2020/06/05/policekillings/

Kaste, M. 2020, September 9. "NYPD Study: Implicit Bias Training Changes Minds, not Necessarily Behavior." *National Public Radio*. https://www.npr.org/2020/09/10 /909380525/nypd-study-implicit-bias-training-changes-minds-not-necessarily-behavior

Kearns, E. M., Ashooh, E., & Lowrey-Kinberg, B. 2019. "Racial Differences in Conceptualizing Legitimacy and Trust in Police." *American Journal of Criminal Justice* 45: 190-214.

Kelling, G. L., & Wilson, J. Q. 1982, March. "Broken Windows: The Police and Neighborhood Safety." *The Atlantic*. https://www.theatlantic.com/magazine/archive /1982/03/broken-windows/304465/.

Kennedy, B. A., Butz, A. M., Lajevardi, N., & Nanes, M. J. 2017. *Race and Representative Bureaucracy in American Policing*. Springer International Publishing.

Knox, D., Lowe, W., & Mummolo, J. 2020. "Administrative Records Mask Racially Biased Policing." *American Political Science Review 114*(3), 619–637. DOI: 10.1017/S0003055420000039

Kodelja, Z. 2019. "Violence in Schools: Zero Tolerance Policies." *Ethics & Education 14*(2), 247–257. DOI: 10.1080/17449642.2019.1587682 https://doi.org/10.1080/17449642.2019.1587682

Kramer, R., & Remster, B. 2018. "Stop, Frisk, and Assault? Racial Disparities in Police Use of Force During Investigatory Stops." *Law & Society Review 52*(4): 960–993. DOI: 10.1111/lasr.12366

La Vigne, N. G., Lachman, P., Rao, S., & Matthews, A. 2014. "Stop and Frisk: Balancing Crime Control with Community Relations." *Urban Institute*. https://www.urban.org/sites/default/files/publication/33661/413258-Stop-and-Frisk-Balancing-Crime-Control-with-Community-Relations.PDF

Lenahan, R. 2017. "What "Stop-and-Frisk" Really Means: Discrimination & Use of Force." *Prison Policy Initiative*. https://www.prisonpolicy.org/reports/stopandfrisk.html

Lipsky, M. 2010. *Street-Level Bureaucracy: Dilemmas of the Individual in Public Service* (30th anniversary expanded edition). New York, NY: The Russell Sage Foundation.

Long, J. S. 1997. *Regression Models for Categorical and Limited Dependent Variables*. Thousand Oaks, CA: Sage Publications, Inc.

Lorenz, A. R. S. 2010. The Windows Remain Broken: How Zero Tolerance Destroyed Due

Process." *Public Integrity 12*(3), 247–259. DOI: 10.2753/PIN1099-9922120304

MacDonald, J., & Braga, A. A. 2018. "Did Post-Floyd et al. Reforms Reduce Racial Disparities in NYPD Stop, Question, and Frisk Practices? An Exploratory Analysis Using External and Internal Benchmarks." *Justice Quarterly 5*, 954–983. DOI: 10.1080/07418825.2018.1427278

Mapping Police Violence. 2020. *Police Violence Map* [Infographic]. https://mappingpoliceviolence.org/

Menifield, C. E., Shin, G., & Strother, L. 2018. "Do White Law Enforcement Officers Target Minority Suspects?" *Public Administration Review 79*(1), 56-68.

Musheno, M. 2016. "Of Fergusons: Blunting Racialized Predatory Policing. Review of the book *Becoming bureaucrats: Socialization at the front lines of government service* by Oberfield, Z. W. *Journal of Public Administration Research and Theory* 389–401.

Neklason, A. 2019, May 16. "The 'Broken Windows' Debate Survives its Creators. *The Atlantic*. https://www.theatlantic.com/ideas/archive/2019/05/the-broken-windows-debate-survives-its-creators/589645/

Neusteter, R., & O'Toole, M. 2019. "Every Three Seconds: Unlocking Police Data on Arrests." *Vera Institute of Justice*. https://www.vera.org/publications/arrest-trends-every-three-seconds-landing/arrest-trends-every-three-seconds/overview

Nicholson-Crotty, S., Nicholson-Crotty, J., & Fernandez, S. 2017. "Will More Black Cops Matter? Officer Race and Police-Involved Homicides of Black Citizens." *Public Administration Review 77*(2), 206-216.

Nisar, M. A. 2017. "Overcoming Resistance to Resistance in Public Administration: Resistance Strategies of Marginalized Publics in Civilian-State Interactions." *Public Administration and Development 38*, 15–25. DOI: 10.1002/pad.1817

Nussbaum, B. 2012. "From Brescia to Bin Laden: The NYPD, International Policing, and "National" Security." *Journal of Applied Security Research 7*(2), 178–202. DOI: 10.1080/19361610.2012.656251

City of New York. 2020. *About NYPD*. https://www1.nyc.gov/site/nypd/about/about-nypd/about-nypd-landing.page

Passavant, P. A. 2015. "I Can't Breathe: Heeding the Call of Justice." *Law, Culture and the Humanities 11*(3), 330–339. DOI: 10.1177/1743872115581759

Ramirez, D., Wraight, M., Kilmister, L., & Perkins, C. (2019). Policing the Police: Could Mandatory Professional Liability Insurance for Officers Provide a New Accountability Model?" *American Journal of Criminal Law 45*(2), 407–459.

Reaves, B. 2011. Census of state and local law enforcement agencies, 2008. *U.S. Department of Justice, Bureau of Justice Statistics*. https://www.bjs.gov/content/pub/pdf/csllea08.pdf

Stoudt, B. G., Torre, M. E., Bartley, P., Bissell, E., Bracy, F., Caldwell, H., Dewey, L., Downs, A., Greene, C., Haldipur, J., Lizama, S., Hassan, P., Manoff, E., Sheppard, N., & Yates, J. 2019. "Researching at the Community-University Borderlands: Using Public Science to Study Policing in the South Bronx." *Education Policy Analysis Archives 27*(56).

Terry v. Ohio. 392 U.S. 1. 1968. https://www.loc.gov/item/usrep392001/

Vera Institute of Justice. (n.d.). Arrest trends. Vera Institute of Justice. Retrieved October 28, 2020 from https://arresttrends.vera.org/data-reported

White, M. D., & Kane, R. J. 2013. "Pathways to Career-Ending Police Misconduct: An Examination of Patterns, Timing, and Organizational Responses to Officer Malfeasance in the NYPD." *Criminal Justice and Behavior 40*(11), 1301–1325. DOI:

10.1177/0093854813486269
Wright II, J. E., & Headley, A. M. 2020. “Police Use of Force Interactions: Is Race Relevant or Gender Germane?” *American Review of Public Administration 50*(8), 851-864.