Vassar College

Digital Window @ Vassar

Senior Capstone Projects

2020

Violence as an Infectious Disease: Using a Public Health Approach to Mitigate the United States' Proliferation of Police Violence

Elizabeth Gibbs

Follow this and additional works at: https://digitalwindow.vassar.edu/senior_capstone

Violence as an Infectious Disease:
Using a Public Health Approach to Mitigate the United States' Proliferation of Police Violence

Elizabeth Gibbs
April 30, 2020

A Senior Thesis
Advised by Janet Gray and Leroy Cooper

Submitted to the Faculty of Vassar College in Partial Fulfillment of the Requirements for the Degree of Bachelor of the Arts in Science, Technology, and Society

Table of Contents

Acknowledgments

Writing this thesis would not have been possible without the love and support and guidance of so many. To my advisors, Janet Gray and Leroy Cooper, thank you for your feedback on my writing and for being so patient with me throughout this process. Janet, thank you for listening to my ideas (as they changed so, so many times), for encouraging me to follow my heart and mind, and for the constant confidence in my ability to actualize my ideas.

To the Science, Technology, and Society program, thank you for existing! It took a bit of trial and error for me to find an intellectual home here at Vassar, and I feel immensely grateful for a major that speaks to so many of my interests, particularly public health and violence prevention. To all my STS professors, and my advisor, Nancy Pokrywka, thank you for guidance and for providing me with an education founded in intersectionality.

To my mom and sister, I love you both so much. Mom, thank you for working so hard to give me the opportunity to study at Vassar. I cannot thank you enough for all of your sacrifices to help me get to where I am today. Olivia, thank you for the endless laughs, love, and encouragement.

To my dad, thank you for the love and assurances, and faith in my abilities.

To my grandma, thank you for supporting me and my education my whole life.

To my Poughkeepsie family, thank you for the years of encouragement and love. Thank you for reminding me that I had the ability to see this process through, for listening to my ideas, over and over again, for the constant reassurance, and for the late nights in the OLB and the library basement. My fellow thesis-writers: thank you for your passion for your own ideas, for keeping me inspired and excited to continue learning.

To my team, the Cyber Nunx! I love you all an immense amount; having this community as an outlet and space to be my full self means more to me than you'll ever know. See you all on Noyes sometime soon!

To TH Flirty ☺, Milo, Jane, Jake, and Jenny, thank you for the love and validation throughout this year. I could not have imagined a better group of people to live and grow (and procrastinate) with.

Lastly, to my partner, Jane, thank you for always believing in me, I love you!

Note

As a white person, I have not directly experienced the harmful effects of police surveillance and violence. The violence and harm perpetrated by police in this country disproportionately affects communities of color, particularly endangering the lives of young black and brown men. As someone who is committed to anti-violence practices and harm reduction, I wanted to learn about how to disrupt one of the most prolific, yet ignored, types of violence that occurs in this country: the violence of the untouchables, the American police. This being said, my positionality as a white person means that my argument will not address all facets of the lived experiences of those who are most subjected to police violence. I embrace, and preemptively appreciate the future extensions of this crucial conversation.

It would also be paradoxical of me to write a thesis on violence, particularly white heteropatriarchal violence, without acknowledging the violence that occurred and occurs against Indigenous peoples on the land upon which Vassar presently occupies. Vassar College is situated on Delaware Lenni Lenape Nation, and Stockbridge-Munsee Mohican lands, lands seized through genocidal tactics of displacement by white colonists. The Delaware people today live across North America, but are largely concentrated in Oklahoma and Ontario, Canada as a result of their forced migration. The Stockbridge-Munsee Mohican people are also spread across North America today, but presently, most live in northeastern Wisconsin. Colonial violence inflicted against the Indigenous people of this land is rarely spoken about, and if spoken about, is discussed in the past tense. In order to live non-violently, we (particularly the white *we*) must commit to resisting systemic oppression and colonial practices and commit to standing in solidarity with Indigenous movements for self-determination.

Introduction

       Despite directly threatening everyone's health, violence has historically been viewed not as a public health crisis, but as a problem of individual crime. This emphasis on individuality removes collective responsibility from working towards eradicating violence. Moreover, currently, in the United States (US), violence has mostly been "controlled" by punitive measures, due to the belief that violent action is one's independent, moralistic problem, the result of someone being "bad" or "evil," when truly, it is a societal problem that can be prevented if treated as such.[1] Over the course of this thesis, I will be arguing that violence is an infectious disease, and furthermore, that police violence is synonymous with gang violence and needs to be eradicated with equal vigor as all other types of violence.

       The World Health Organization's (WHO) definition of violence encapsulates the scope of violent action: physical, sexual, psychological, and deprivation-based. Their 1996 definition of violence is as follows:

> "The intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation."[2]

Research has demonstrated that violence is caused by many factors, most prominently factors that emerge as a result of systemic oppression. These social, cultural, and economic experiences, as well as interactions with one's family, community, and persons in power, contribute to one's exposure to and interactions with violence.[3]

---

[1] Linda L. Dahlberg and Etienne G. Krug, "Violence - a Global Public Health Problem," in *World Report on Violence and Health* (Geneva: World Health Organization, 2002), 17.

[2] "Definition and Typology of Violence," World Health Organization (Violence Prevention Alliance, November 21, 2011).

[3] Dahlberg and Krug, "Violence - a Global Public Health Problem," 3.

Violence is a leading cause of death in the US. Every hour, seven people die a violent death.[4] Despite homicide being the third leading cause of death for people between the ages of one and forty-five, there have been no nation-wide, collective public health efforts to alleviate this.[5] Exposure to any violence increases one's risk of enduring negative health experiences throughout their lives, resulting in higher morbidity and mortality rates, leading to lost life-years, illnesses, homelessness, poverty, lack of education, and more.[6] Financially speaking, in the US, an estimated $90 billion are lost every year because of medical care reacting to violent situations and lost work.[7] While acknowledging this is a massive amount of money that could go toward anti-violence work, it is also important to discuss the indirect and intangible costs of experiencing violence, manifesting in reduced work performance or lower quality of life, and increased feelings and actions of suicidality.[8] Making this crisis even more difficult to address, a violence-free world appears to be unattainable in society today. The media has normalized almost all aspects of violent acts, broadcasting events such as war footage and school shootings, all which end up infiltrating movies and video games. Violence is everywhere and it has been assimilated to fit into our everyday media consumption, and it is imperative, though difficult, to recognize its omnipresence and to work diligently to change the current narrative around it.[9]

Currently, the US is employing a combination of law enforcement (also referred to as policing, or police, throughout this thesis) and incarceration to address violence. These systems are not only failing but are also reproducing environments that lead to violence. As of March

[4] "National Violent Death Reporting System (NVDRS)," Centers for Disease Control and Prevention (Centers for Disease Control and Prevention, November 7, 2019).

[5] "Addressing Violence as a Health Crisis with Health Methods," (Cure Violence Global, January 2017).

[6] Dahlberg and Krug, "Violence - a Global Public Health Problem," 17.

[7] "National Violent Death Reporting System (NVDRS)," Centers for Disease Control and Prevention.

[8] Dahlberg and Krug, "Violence - a Global Public Health Problem," 18.

[9] Ibid., 17.

2020, the American carceral system holds 2.3 million people; "Every year, over 600,000 people enter prison gates, but people go to jail 10.6 million times each year."[10]

Community-centered and community-specific public health initiatives have several documented successes of disrupting patterns of violence. One organization in particular, Cure Violence, uses an adaptation of a public health model for treating infectious diseases in order to reduce violent incidents and tendencies in the communities it works within. I will be analyzing Cure Violence's approach and successes in my final chapter.

The first chapter of my thesis will argue that violence should be considered and treated as an infectious disease, as well as why that designation is important and is foundational for enacting a public health response. The second chapter will be discussing social network theory, exemplifying how violence travels like an infectious disease through tightly-knit networks. In this chapter, I will also be arguing that police violence mirrors gang violence in order to set the stage for asserting that police violence should be treated with a public health model. The third chapter will provide evidence to set the precedent that police and prisons are failing and are harmful, thus inadequate systems to address and prevent violence. In my last chapter, I will present a general public health model for responding to infectious diseases. Data and analyses from Cure Violence's initial program, CeaseFire Chicago, will demonstrate the successes of using a public health model to address violence. In the conclusion of my final chapter, I will hypothesize how the Cure Violence model can be adapted to address police violence, particularly responding to and preventing police homicides and other acts of violence. My conclusion will discuss ideas and expressions of community care and accountability as steps to move forward.

---

[10] Wendy Sawyer and Peter Wagner, "Mass Incarceration: The Whole Pie 2020," Prison Policy Initiative, March 24, 2020.

Chapter 1: Violence as an Infectious Behavior

Introduction: Healthfulness and Disease

Disease and the concept of disease are ever-changing, ever-growing entities. When asked to define disease, in lay, non-scientific terms, I think of the opposite of health. Then I ask, how is health defined? What does it mean to be healthy? Can there be just one definition? Furthermore, how do we create an intersectional definition, when definitions of both healthfulness and illness differ greatly from culture to culture, "var[ying] with class, gender, ethnic group and less obvious factors…"[11] Social context is incredibly important in crafting this definition, and it is necessary to acknowledge that societies in the global North have the tendency to over-pathologize conditions of the mind and body. While researching various definitions of health and healthfulness, I was drawn to the World Health Organization's 1946 definition. The WHO's definition has been deemed "wildly utopian," but I believe its holistic nature is something to be strived for. [12] They define health as "a state of complete physical, mental and social well-being, not merely the absence of disease or infirmity."[13] In 2020, this may seem impossible or outlandish. Even so, I think it is important to reach for goals as ideal and romantic as this one: for every person to have a right to a state of well-being, however they may describe it.

Deriving from the WHO's definition of health, disease can be defined as divergence from a state of healthfulness, as anything hindering a person's or population's experience of well-being. If something alien is introduced to the body, disease can possibly develop. The alien agent can be biological or social, essentially any entity that derails the body from operating the way it did before the agent was introduced. In this chapter, I am arguing that violence is an infectious disease, detracting from the health and well-being of anyone infected by it.

---

[11] Jackie Leach Scully. "What Is a Disease?" EMBO Reports 5, no. 7 (July 2004), 650.
[12] Ibid., 650.
[13] WHO (1946) Preamble to the Constitution of the World Health Organization. WHO, New York, USA.

Characteristics and Treatments of Non-Communicable and Infectious Diseases

Biologically, diseases are classified as either non-communicable or communicable (infectious). Non-communicable diseases (NCDs) are often chronic and tend to progress slowly. As described by the Centers for Disease Control and Prevention (CDC), they do not "resolve spontaneously" and complete cures are "rarely achieved."[14] Risk factors that lead to NCDs include, but are not limited to, hereditary characteristics, environmental exposure, or "personal behavioral risks," such as smoking, physical inactivity, or excessive consumption of alcohol.[15] The four main types of NCDs, according to the WHO, are cardiovascular diseases, cancer, chronic respiratory diseases, and diabetes.[16] Non-communicable diseases "do not result from an acute infectious process" and therefore cannot be transmitted to others.

Infectious diseases vary greatly from NCDs as they develop from an initial infection, though not all infections lead to disease.[17] People can contract infections after direct or indirect contact with an infectious agent being carried by various vectors, such as humans, non-human animals, plants, or microbes.[18,19] The infectious agents are can be classified as pathogenic microorganisms, such as bacteria, viruses, and protozoa, which enter the body after contact with the vector. Once infected, the body's immune system is triggered and engages mechanisms to expel the infection. Certain immune-specific cells and antibodies are "released into the blood and

---

[14] "Overview of Noncommunicable Diseases and Related Risk Factors," Department of Health and Human Services, Centers for Disease Control and Prevention, Sept. 11, 2013.
[15] Ibid.
[16] "10 Facts on Noncommunicable Diseases," World Health Organization. World Health Organization, March 29, 2014.
*NCDs are also discussed as diseases that can be remedied with public health efforts, as many are a byproduct of engaging in behaviors made necessary for survival due to poverty perpetuated by systemic racism, classism, sexism, and other oppressive systems.
[17] M. Drexler, "How Infection Works" in *What You Need to Know About Infectious Disease* (Washington DC: National Academies Press, 2010).
[18] CA Janeway Jr., P Travers, M Walport et al., "Infectious agents and how they cause disease," Chapter 10 in *Immunobiology: The Immune System in Health and Disease*, 5th edition. (New York: Garland Science, 2001).
[19] "Contagious Disease Definition," National Institutes of Health (U.S. Department of Health and Human Services), accessed December 2019.

recruited to the site of infection," where the infection can be contained and oftentimes eliminated.[20] Sometimes, however, the adaptive immune response is weakened by the infection, and the infection persists in a latent form. This is typically where diseases arise: when the immune system can no longer sufficiently respond to the infection due to its rapid mutation and outmaneuvering of the typical defense mechanisms. These infections cause the most damage by interrupting normal cell functioning, for example, by releasing toxic products into the cell. By disrupting cell functioning and destroying masses of cells, the infection persists in the body as a disease, and infectious agents are readily transmittable to whomever or whatever comes into contact with the now infected individual.

Non-communicable disease treatment varies according to diagnosis. If possible, NCDs are treated, and if there is no cure, palliative care is given to those in need.[21] Oftentimes, there is ongoing research striving to identify a source and a solution; the urgency at which this research is approached is typically correlated to the temporal progression of the disease and the number of people affected. As NCDs are highly associated with environmental and behavioral factors, public health interventions are enacted to minimize public risks and modify environments as much as possible to increase accessibility to cleaner air, safer water, and healthier foods, as well as increase access to affordable, appropriate medical care.[22]

Infectious diseases are often treated with much more urgency than NCDs, as they are able to spread, infect, and debilitate large populations very quickly. Health workers act quickly to control the spread of the disease to minimize the size of the outbreak, oftentimes isolating

---

[20] Janeway Jr. et al., "Infectious agents and how they cause disease."
[21] "Management of Noncommunicable Diseases," World Health Organization (World Health Organization), accessed December 2019.
[22] "Package of Essential Noncommunicable (PEN) Disease Interventions for Primary Health Care in Low-Resource Settings," World Health Organization (Geneva: World Health Organization, 2010), 10, 16-17, 25.

infected individuals and providing them with appropriate treatment. Without adequate control, "infectious disease during an emergency condition can raise the death rate 60 times in comparison to other cases including trauma."[23] Outbreaks occur when ideal situations and environments for spread arise. The current COVID-19 pandemic is a tragically ideal example of this. As technology advances and travel is made easier, people are moving around more and more, farther and faster than they used to, creating many more nexuses of contact.[24] Despite efforts of social distancing and stay-at-home orders, New York City is currently experiencing the worst outbreak in the US. As Dr. Steven Goodman, an epidemiologist at Stanford University, said "Density is really an enemy in a situation like this. With large population centers, where people are interacting with more people all the time, that's where [the disease is] going to spread the fastest."[25]

In emergency situations, health workers are trained to rapidly identify and assess the cause of trauma in the community and create a plan to reduce morbidity and mortality. These plans consist of three main steps: identifying present infections and providing treatment, identifying and treating high risk individuals, and changing the environment to prevent further spread or reoccurrence.[26] The rapid assessment consists of learning as much as possible about the disease as well as the community it is affecting. Non-domestic health workers should be familiar with various community characteristics such as the landscape, morbidity, mortality, demography, food and water access points, sanitation, and community leadership.[27] The second step, identifying and treating high-risk individuals, limits interactions of the high-risk infected

[23] Jonathan Ameli, "Communicable Diseases and Outbreak Control," Turkish Journal of Emergency Medicine (Elsevier, March 9, 2016), 20.
[24] Richard Florida, "The Geography of Coronavirus," *CityLab*, April 3, 2020.
[25] Brian M. Rosenthal, "Density Is New York City's Big 'Enemy' in the Coronavirus Fight," *The New York Times*, March 23, 2020.
[26] Ameli, "Communicable Diseases and Outbreak Control," 21.
[27] Ameli, "Communicable Disease and Outbreak Control."

individuals with the rest of the community until treated, reducing potential indices of transmission.[28] Lastly, changing the environment that was conducive to the spread of the disease is necessary to prevent any recurrence and to "flatten the curve."[29] This can be done through vaccination, improved access to clean water, access to medical care, implementation of accessible healthcare systems, and more.[30] Rapid, community-appropriate response is necessary to reduce the likelihood of disease spread and prepares communities with the proper resources and protocols needed on the chance another breakout occurs.

Behavioral and Emotional Infection

While there has been extensive research on biological infectious diseases, there is an emerging field of social-scientific and public health research on social and emotional infection. Behavioral analyses and empirical research have confirmed that human behavior tends to form clusters in both space and time "even in the absence of coercion and rationale," similar to biological disease.[31]

Emotional states can be transferred to others via emotional infection: the tendency for people to experience the same emotions as those in their surroundings without consciously acting to do so.[32] People also tend to experience emotional infection without indices of direct interaction. This phenomenon can occur in the absence of verbal cues and manifest from nonverbal cues such as body language, social media, video games, and more.[33] Studies have

---

[28] "Chapter 10: Controlling the spread of infectious diseases," *Advancing the right to health: the vital role of law,* (World Health Organization, 2016), 160.

[29] Brandon Specktor, "Coronavirus: What is 'flattening the curve,' and will it work?" *Live Science,* March 16, 2020.

[30] "Chapter 10: Controlling the spread of infectious diseases," 152.

[31] Paul Marsden, "Memetics & Social Contagion: Two Sides of the Same Coin?" *Journal of Memetics: Evolutionary Models of Information Transmission* 2 (1998).

[32] Adam D. I. Kramer, Jamie E. Guillory, and Jeffery T. Hancock, "Experimental Evidence of Massive-Scale Emotional Contagion through Social Networks," Proceedings of the National Academy of Sciences of the United States of America 111, no. 24 (June 2, 2014), 8788.

[33] Ibid., 8788.

shown that emotional infections tend to exist as "relatively automatic, unintentional, uncontrollable, and largely inaccessible to conversant awareness" as byproducts of reactions to multi-level phenomena.[34] Emotions are generated through different combinations of neural systems, creating emotionally relevant responses according to the stimulus and response. The amygdala detects, encodes, and triggers responses to stimuli, particularly potential threats. Other activated areas of the brain include the ventral striatum, which acts to learn the reward value of a stimulus, and the insula, which supports awareness of the body in context of emotional reaction.[35] These multi-level phenomena are experienced by encountering stimuli from one individual which is then acted or reacted upon by others, and others, and others, and so on. The mimicry of emotion is subconscious, consisting of mirroring facial expressions, vocal expressions, postures, movements, and actions. This is consistent with groups forming after experiencing similar actions and interactions, following the trend of groups to then assume attentional, emotional, and behavioral synchrony.[36]

Behavior has been defined essentially as observable activity, which includes verbal expressions.[37] Similar to emotional states being transferable via emotional infection, behavior too spreads like infectious biological disease. Studies have shown that people learn violent behaviors like any other social behavior or emotion, through experience or observation and

---

[34] Elaine Hatfield, John T. Cacioppo, and Richard L. Rapson, "Introduction and Overview," in *Emotional Contagion: Studies in Emotion and Social Interaction* (Cambridge: Cambridge University Press, 1993), 5.
[35] Laura Martin Braunstein and James J. Gross, "Explicit and Implicit Emotion Regulation: a Multi-Level Framework," *Social Cognitive and Affective Neuroscience* 12, no. 10 (September 15, 2017), 1549.
[36] Hatfield et al., *Emotional Contagion*, 5.
[37] Raymond M. Bergner, "What Is Behavior? And so What?" *New Ideas in Psychology* 29 (2011), 147.

eventual imitation.[38] Behavioral shifts are reflected in differing neural activity, experienced when an individual's decision-making processes are changed after observing another's behavior.[39]

Familiar phenomena of infectious behavior include yawning or itching. Yawning and itching are mirroring behaviors; when one observes someone else engaging in those actions, they proceed to subconsciously mirror them.[40] On the more extreme end of examples is mass psychogenic illness (MPI), when someone gets sick because they observe someone else getting or acting sick.[41] Shirley Wang, with the Association for Psychological Science, recounted an incident in 1998, when a teacher at a Tennessee high school noticed a gas-like smell in her classroom, and soon after felt symptoms of dizziness and nausea.[42] She was brought to the nearby hospital, and by the end of that day, 100 more people had showed up to the emergency room with the same symptoms, as they believed they had been exposed to gas at the school. No physical illness could be detected by the hospital, and tests at the school later demonstrated that there was no toxic source. What happened at this high school is a clear example of MPI, "in which symptoms are passed from person to person among people who are visible to one another."[43] Though an extreme, MPI is an example of behavioral infection, where observation of another's behavior subconsciously influences one's own. Wang goes on to explain that human brains have certain types of neurons that fire simply from watching someone else carry out an action (she gives the example of watching a football game – when you see the quarterback

---

[38] Robert M. Bond and Brad J. Bushman, "The Contagious Spread of Violence Among US Adolescents Through Social Networks," *American Journal of Public Health* 107, no. 2 (February 2017), 288.

[39] Shinsuke Suzuki et al., "Behavioral Contagion during Learning about Another Agent's Risk-Preferences Acts on the Neural Representation of Decision-Risk," *Proceedings of the National Academy of Sciences of the United States of America* 113, no. 14 (April 5, 2016), 3755.

[40] RR Provine, "Contagious Behavior: an Alternative Approach to Mirror-like Phenomena," *Behavioral and Brain Sciences* 37, no. 2 (April 2014), 216.

[41] Shirley Wang, "Contagious Behavior," Association for Psychological Science - APS, February 2006.

[42] Ibid.

[43] Ibid.

throw, your arm experiences vicarious electrical signals), which primes us to understand and identify with other people and their actions. The ability for humans to mimic and mirror behavior is a subconscious manifestation of behavioral contagion.[44]

Violence as an Infectious Disease

From this point forward, I am analyzing violence as an infectious behavior. Violence, the infection of violence, and the treatment of violence all mimic the parallel instances of biological infection. Like an infection, violence spreads when left untreated.[45] Whether exposure is direct (experiencing a violent act) or indirect (watching a movie, playing a video game, or witnessing people fight), the more exposure one has increases the likelihood of one contracting the disease.[46] Infection manifests from the observation or participation in violent acts; disease presents as violent actions or inclinations. After one is infected, the immune system tries to prevent the infection from taking permanent hold in the body. Intervention and interruption of the infection is needed at this stage, similar to administering antibiotics to someone experiencing symptoms of a disease. By identifying high-risk transmitters, (i.e., those who have already been infected and have yet to receive treatment) and offering them resources for treatment and support, spread can be curbed. If left untreated, those who are infected spread the violent behavior by outwardly enacting violence, whether that manifestation is instant or delayed. Subsequently, this violence is experienced by others, whether firsthand or through a network of interactions, and continues to spread. Additionally, by addressing the context and environment of why the violence occurred, identifying what led to the act of violence and changing or alleviating the reason will help prevent spread. Evidence presented in *Contagion of Violence*, a summary of

---

[44] Ibid.

[45] Jeffrey A. Butts, Lindsay Bostwick, and Jeremy R. Porter, "Cure Violence: A Public Health Model to Reduce Gun Violence," *Annual Review of Public Health* 36 (March 2015), 39.

[46] Bond et al., "The Contagious Spread of Violence," 291.

a workshop on violence prevention, supports that interventions "are key to interrupting the contagion of violence."[47] In the workshop, Dr. Jeffrey Fagan,[48] a professor of epidemiology with a focus on violence prevention, suggested "retooling the relationships between the police and gun offenders could help interrupt community-level violence. Unregulated punishment can exacerbate susceptibility to violence and increase the network density of people who share police victimization experiences."[49] By concentrating on the factors that lead to and perpetuate the cycle of violence, areas for intervention can arise to facilitate the disruption of the cycle.

Following the trend of infectious diseases, likelihood of spread decreases the farther away one is in the network from the original infected person. Any exposure to violence "increase[s] a person's risk of adopting violent behavior themselves, meaning that violent behavior transmits and spreads based on exposure – just like an epidemic disease."[50] Embodying characteristics of epidemics, violence too clusters and spreads when left unaddressed. Violence itself exemplifies the inherent aspects of disease, as I defined earlier in tandem with the WHO's 1946 definition, as it leads to the absence of healthfulness. It plagues individuals and communities by eliminating the possibility of experiencing complete physical, mental, and social well-being. Personal contact with the disease will infect, and will continue to infect and possibly mature into disease, until interrupted. Researchers at Ohio State University, Bond and Bushman, write, "People exposed to a contagious disease are at increased risk of contracting the disease themselves. Numerous studies have shown that people who are exposed to violence – as observers or victims – are more likely to become perpetrators of violence themselves."[51] Spread

[47] National Research Council, *Contagion of Violence: Workshop Summary* (Washington, DC: The National Academies Press, 2013), 14.
[48] "Jeffrey Fagan," Columbia Mailman School of Public Health, accessed April 2020.
[49] *Contagion of Violence*, 14.
[50] "The Big Idea," Cure Violence (Cure Violence Global, 2019).
[51] Bond et al., "The Contagious Spread of Violence," 288.

can be fast or slow, as incubation periods vary. However, once the incubation period has passed, cases of disease (violence) aggregate, grouping closely both geographically and temporally.[52]

Like biological disease, violence can be predicted. By looking at underlying social networks, high-risk individuals, past outbreaks, and factors leading to violence, one can predict where it will happen, how it will happen, and who will perpetrate the action – all from historical analysis of incidences.[53] Predicting patterns of violence acts upon the same mechanisms of predicting the flu:

> "the greatest predictor of subsequent cases of colds, flu, SARS, Legionnaire's [sic] disease, and other infectious diseases is a prior case – and specifically exposure to a prior case – of that infection. It has been said for a long time that violence begets violence, but it is *just as tuberculosis begets tuberculosis, or flu begets flu, that violence begets violence.*"[54]

Addressing and acting upon the factors increasing or decreasing the likelihood of an outbreak can halt the spread and open up loci for treatment and future prevention.

Conclusion: The Benefits of Terming Violence as a Disease

Multiple advantages are associated with defining something as a disease. Terming something as a disease, rather than a misbehavior or an individual flaw, attracts the attention of medical and public health forces. The identification of violence, and specifically law enforcement violence, by the American Public Health Association as a public health issue has directed more resources to ending police violence in the US than ever before.[55] Medicine and medical care are viewed in the US as limited resources, and those in control of those resources

---

[52] Ibid., 288.

[53] Ben Green, Thibaut Horel, and Andrew V. Papachristos, "Modeling Contagion Through Social Networks to Explain and Predict Gunshot Violence in Chicago, 2006 to 2014," *JAMA Internal Medicine* 177, no. 3 (January 3, 2017), 328.

[54] Gary Slutkin, "Violence Is a Contagious Disease," in *Contagion of Violence: Workshop Summary* (Washington, DC: The National Academies Press, 2013), 104.

[55] American Public Health Association, *Addressing Law Enforcement Violence as a Public Health Issue*, Policy Number: 201811 (Nov. 13, 2018).

ideally want to apply those resources to the most time-sensitive, virulent, and widespread diseases. Applying the labels of "an infectious disease" and "a public health issue" to violence directs attention and resources toward remedying the crisis. When it comes to health, people do not want to fall ill, people do not want to die. When disease strikes, whether infectious or an NCD, healing the majority protects the individual. When researchers, doctors, and other health care workers collectivize to aid affected populations, a solution is often reached. If those who collectivize have funding as well as societal and governmental support, they are able to access more resources to help communities who have fallen ill from diseases – communities that have experienced great violence. By legitimizing violence as a disease and a crisis, space is created for more people, organizations, and resources to be enacted for the purpose of ending that crisis. Violence is a health crisis, it is a disease, and the public recognition of it as such will allow for measures to be taken to end it.

Chapter 2: Network Facilitation of Behavioral Spread

Introduction: Social Networks and Homophily

Social networks, whether hidden or in plain sight, affect rates of spread and transmission of infectious diseases. Evidence backs the theory that "social networks affect health through social interactions at the microlevel affecting behavior at the meso- and macro-levels, and previous research has helped us [the authors] understand the effect of social networks on a range of health behaviors."[56] From this assertion, utilizing existing networks and paying attention to their influence on behavior change can lead to the effective intervention of an infection's spread and eventually, the stop or decrease of the rate of transmission. Additionally, the consideration and observation of gangs as social networks that perpetrate violence, and law enforcement agencies as gangs, has been integral to analyzing the patterns of spread of violent behaviors.

Social networks are defined as webs of individuals connected to each other through interpersonal relationships. They can be as small as a four-person family to networks as large as entire communities or cities. Social networks often operate on the basis of risk-theory and actions of conformity. Essentially, when an individual observes others' behaviors, those behaviors influence their later decisions, and the individual's behavior often shifts to the initially observed behavior.[57] Typically, health-relevant traits factor into the formation or separation of network ties (relationships), those namely including, but not limited to age, class, income, athleticism, race, level of education, political leanings, religion, and occupation.[58]

Homophily is a prominent factor when networks are being formed; it refers to the tendency for people to form strong social ties with similar others.[59] Homogeneity is greatly

---

[56] Ruth F Hunter et al., "'Hidden' Social Networks in Behavior Change Interventions," *American Journal of Public Health* 105, no. 3 (March 2015), 513.

[57] Suzuki et al., "Behavioral Contagion during Learning…" 3756.

[58] Kirsten P. Smith and Nicholas A. Christakis, "Social Networks and Health," *Annual Review of Sociology* 34 (2008), 415-416.

[59] Ibid., 416.

represented in the make-up of police forces. 77.1% of police officers are white, 13.3% of police

officers are black, and 9.6% of police officers are made up of "other races."[60] Likewise, 85.3%

of police officers are male and 14.7% of police officers are female.[61] Thus, we can see that police

forces in the US are overwhelmingly (and disproportionately) white and male. An interactive

article published by The New York Times exemplifies the typical "race gap" in US police

departments, finding that the percentage of white officers on the force is on average "more than

30 percentage points higher than in the communities they serve" (See Appendix, Figure 1).[62]

When people in networks share similarities, they tend to have more contact with each

other and more in common to create a strong foundation for the network.[63] Due to the degree of

closeness shared in many ties within a network, the spread of contagious factors is easily

facilitated. The spread of these factors is also closely tied to the structure of the network,

particularly in relation to the network's topological properties.[64] These include the tendencies for

there to be a leader, or multiple leaders, in a network, and many individuals (nodes) which

follow the norms and actions presented by the leader(s). Geodetic properties similarly factor into

the ease of dissemination of contagion, particularly the degrees of separation between the

initiator of an action and an individual, diameters of networks, and the centrality and clustering

of social networks, all of which are encompassed in studies of contagion within community

social networks.[65]

---

[60] Data USA, "Race & Ethnicity: Most Common Race or Ethnicity of Police Officers," accessed April 2020.
[61] Data USA, "Gender Composition," accessed April 2, 2020.
[62] Jeremy Ashkenas and Haeyoun Park, "The Race Gap in America's Police Departments," The New York Times (The New York Times, April 8, 2015).
[63] Mark S. Fleisher and Christopher C. McCarty, "Social Networks and Violence," In *The Cambridge Handbook of Violent Behavior and Aggression*, ed. Alexander T. Vazsonyi et al. (Cambridge: Cambridge University Press, 2018), 516.
[64] Dingzhou Fei, "Stochastic Model for Emotion Contagion in Social Networks Security Based on Machine Learning," *Safety Science* 118, (October 2019), 757.
[65] Ibid., 758.

Network Facilitation of Infection

Infection and infectious factors adapt according to the structure of networks in order to spread effectively. Infection is limited to certain degrees of separation between the source and other nodes, and the strength of the influence of contagion decays with increasing time and distance.[66] Studies have shown that high-degree nodes, i.e. leaders or highly respected individuals within a network, are disproportionately the source of introducing novel behaviors to a network.[67] These actors, who have many ties, exist in a position of centrality, and can reach a larger number of individuals over the course of a short distance. Consequently, these actors are extremely prominent in facilitating the spread of novel, contagious behaviors.[68] As emotional states can be directly transferred and learned through observation and imitation, following an infectious disease model, influential actors within a social network can considerably influence network-wide behavior and emotion.

As networks have the capability to spread behavior and emotion, they can too spread the behavior of violent action. Social networks are made up of ties between individuals who are interrelated through various functions: similarities, social relations, interactions, and flows.[69] Similarities link actors in the same temporal and geographical locations, as well as linking them by their shared attributes. Social relations account for types of relationships, whether kinships, friendships, employee-boss relationships, or others. Interactions encompass the range of different degrees of ties, from people we talk to once, to people we interact with daily, to people who help us in times of need. Lastly, flows are determinant of the action by which and speed of information travels among ties in a network. They are dependent on the structure and proximity

---

[66] Ibid., 758.
[67] Andrew Whalen and Kevin Laland, "Conformity Biased Transmission in Social Networks," *Journal of Theoretical Biology* 380, no. 7 (September 7, 2015), 542.
[68] Fleisher et al., "Social Networks and Violence," 517.
[69] Ibid., 513.

of ties within the network, and facilitate the spread of action, information, behavior, and other factors.[70]

Social Networks and Law Enforcement

Patterns of behavior are subsequently formed through recurring social interactions, which are the foundation of social networks. These patterns create a social structure within the network, and subsequently, hierarchy, which is often predicated on fraternity.[71] In police departments, participation in the Fraternal Order of Police (FOP) is quite common; the organization boasts having over 300,000 members nation-wide (nearly 50% of the nation's law enforcement agents). The FOP is the largest nation-wide police association and is made up almost solely of white leaders for local chapters (even in communities predominantly of color), and a 70% white membership base. Infamous for its racist beliefs and public presence, the FOP exemplifies the power of homophily influencing social structures within a network, in this case, police departments nation-wide.[72] The overwhelming presence of and oversight by white officers in police departments subsequently places undue pressure on officers of color to perform arrests and perpetrate harm, often as directives of higher-ups to discredit the belief that policing is a racist institution.[73]

Social structure influences the flow of information within social networks, and subsequently, the behaviors and emotions of individuals within the networks. The two core features of social networks consist of the sort of social ties among nodes and the patterns these ties create across nodes, as described in the preceding paragraph. These features account for

---

[70] Ibid., 513.
[71] Ibid., 513.
[72] Paul Butler, "Why the Fraternal Order of Police Must Go," *The Marshall Project*, October 11, 2017.
[73] Joseph Goldstein and Ashley Southall, "'I Got Tired of Hunting Black and Hispanic People,'" *The New York Times*, December 9, 2019.

individuals' quality of life, physical and mental health, mortality, risk of disease acquisition and

transmission, tendency toward "criminal behavior," and more.[74] The tightly-knit nature of

relationships within law enforcement agencies shares attributes with close social networks.

Individuals within departments function closely and intimately day-to-day; they share

experiences that have the possibility to influence their physical and mental health and engage in

various actions and behaviors together. In their study on violence and social networks,

researchers Fleisher and McCarty detail that individuals within a close social network can share

the tendency to engage in "criminal behavior" together.[75] While criminal behavior is not a

universally defined qualifier, it can be connected to violent behavior. That being said, law

enforcement agents do engage in violent behavior. In a report published by the US Department

of Justice,

> 43% of police officers answered yes to "always following the rules is not
> compatible with getting the job done," 61% "do not always report serious abuse
> by fellow officers," 84% "witnessed fellow officers using more force than
> necessary," and 52% of officers agreed or strongly agreed that it is not unusual for
> police officers to "turn a blind eye" to other officers' improper misconduct."[76]

The behavioral ties between law enforcement agents encourages mutual protection from

punishment and therefore less accountability for transgressive actions.[77] Further supporting the

idea of mutual protection from punishment, sociologist Mark S. Granovetter reaffirms that

individuals' decisions to participate in an activity is influenced by the presence or absence of

other individuals participating in these activities.[78] For example, if one law enforcement agent

---

[74] Ibid., 514.
[75] Ibid., 514.
[76] David Weisburd et al., "Police Attitudes Toward Abuse of Authority: Findings From a National Study," *National Institute of Justice: Research in Brief*, May 2000.
[77] Fleisher et al., "Social Networks and Violence," 519.
[78] Mark S. Granovetter, "The Strength of Weak Ties," *American Journal of Sociology* 78, no. 6 (May 1973), 1361.

sees another using excessive force without repercussions, this can encourage their tendency to

use excessive force in the future.[79]

Re-thinking the Term "Gang"

   Gangs are built upon the simple concept of being a group.[80] They are defined as "first and

foremost social groups," the standard definition being a group of three or more people who

commit crime.[81,82] As the term "criminal" is subjective and not universally defined, I have

chosen to interact with the concept of crime as I have been previously with the term "criminal

activity," which is interacting with it as an entity of violent behavior. A standard gang definition

is a group of three or more people who commit crime, or perpetrate harm, which I posit, applies

to police officers in a common department as gang members, who undisputedly do engage in

harmful and violent behavior.[83] Although many studies depict how violence spreads as an

infectious disease within gangs, I have been unable to find studies of a similar nature that focus

on law enforcement agents. The lack of scholarship and analysis on law enforcement in the US

can likely be attributed due to the privatized status of a supposed public resource – police in the

US are notoriously untouchable, thus, critiquing their actions is not widely done nor accepted.[84]

Historically, there has been a significant gap in legal scholarship on police and police killings.

There is, on average, less than one academic publication a year on police homicides, compared to

about 60 publications each year on the death penalty.[85] For a comparison, there are on average

---

[79] Fleisher et al., "Social Networks and Violence," 514.
[80] Ibid., 518.
[81] Andrew V. Papachristos, David M. Hureau, and Anthony A. Braga, "The Corner and the Crew: The Influence of Geography and Social Networks on Gang Violence," *American Sociological Review* 78, no. 3 (June 2013), 420.
[82] Fleisher et al., "Social Networks and Violence," 518.
[83] I would like to note, while all individual police officers may not be violent, the concept and system of policing is inherently predicated on violence, harm, control, and systemic inequality.
[84] Franklin E. Zimring, *When Police Kill* (Cambridge, MA: Harvard University Press, 2017), 9.
[85] Ibid., 5, 9.

over 1,000 police shootings each year,[86] compared to an average of 42 deaths resulting from the death penalty per year.[87] The discrepancy is stark, ascribed to the national desensitization to police killings, which occur with "numbing familiarity."[88]

To further support this claim, Fleisher and McCarthy's use Sierra-Arevalo and Papachristos' description of gangs to explain their nuances:

> "Sierra-Arevalo and Papachristos (2015) wrote that "[g]angs are more than a collection of individuals. Gangs are a group in the true sense of the word … [these] operate at the supra-individual or collective level" (p. 164). They attribute gang group activities to cohesion among group members. Cohesion, then, enhances gang members' willingness to sustain their gang membership and commit crime. Social processes [a]ffecting cohesion, the researchers argue, explain gang behavior, but they don't specify measures of cohesion. In this conceptualization a gang group is: (1) a multiplex, cohesive group and, (2) upon membership, confers upon new gang members multiple types of relations, creating a sense of one-for-all, all-for-one.[89]

Multiple phrases within this excerpt parallel descriptions of law enforcement agencies within the US: the operation at "supra-individual or collective level," "cohesion...enhanc[ing] gang members' willingness to sustain their gang membership," and "a sense of one-for-all, all-for-one." These multiplex, cohesive groups made up of close ties are dependent on the factors of officers occupying the same space for the majority of their days, every day.[90]

Considering the way that law enforcement can function as a gang – an extremely codependent, behavior-sharing network – it can be determined that these networks have innate and strong functions to facilitate committing acts of violence.[91] The facilitation of violent acts

---

[86] "2019 Police Shootings Database," *The Washington Post*, 2019.
[87] "Executions Overview," *Death Penalty Information Center*, 2020.
[88] Zimring, 9.
[89] Fleisher et al., "Social Networks and Violence," 518.
[90] Victor E. Kappeler, "So You Want To Be a Crime Fighter? Not So Fast," Eastern Kentucky University Online: Police Studies (School of Justice Studies, February 12, 2013).
*I could not find any data, reliable or not, on how much time on average police officers spend in their precincts together. The only paper vaguely touching on this was a diary of a police officer from 2001, which was not representative, and therefore excluded from this research.
[91] Papachristos et al., "The Corner and the Crew," 420.

through group processes is dependent on a range of mechanisms and processes that develop and interact through a basis of the establishment of a collective identity. By thinking and acting as a unit, behaviors tend to be shared and introduced to all group members over time, influencing the way they act in situations and the actions they perpetrate. Gangs function in communities often by enacting various indices of power as mechanisms of social control. They also do so to address threats (or perceived threats), to serve as protectors, especially through an "avenue to mete out justice or correct a perceived wrong."[92] These markers of "gang behavior" are consistent with how police function in communities, "to protect and to serve."[93] Additionally, participation in both "gangs" and law enforcement agencies allows for "achievement of social standing within a community as well as a sense of power."[94]

Conflicts between different groups can influence subsequent acts of violence. These conflicts tend to result in patterns of conflict, which eventually grow into more institutionalized structures of oppression and violence. Regular patterns of conflict create habits which shape gang's (police departments) subsequent violent behavior. This in turn creates and perpetuates hierarchies of supremacy, where aggressive gangs (in this case, police) gain higher status in society, and victimized gangs (in this case, marginalized groups, those who have experienced police-initiated violence) obtain a lower status in society.

The Power of Networks

To further emphasize the vitalness of the consideration of social networks as integral to discussing and mitigating violence, it is important to acknowledge the inherent link between social networks and health. Simply put, people are connected, and therefore their health is

---

[92] Ibid., 420.

[93] "The Origin of the LAPD Motto," Official Site of the Los Angeles Police Department, n.d., (Reprinted from BEAT Magazine, December 1963)

[94] Papachristos et al., "The Corner and the Crew," 421.

interconnected.[95] Social network analyses have been used to study various human-based phenomena, including but not limited to aging, mortality, interpersonal violence, gangs, community social support networks, and crime and criminal intelligence.[96] Looking at specific facets of networks that facilitate cyclical violence is essential when attempting to understand how networks have the potential to negatively affects health. By studying networks and mapping relationships, commonalities, and experiences, violence-related indices can be identified. Focal-point individuals – those who have many ties throughout a network – can also be identified as being a potential high-risk nexus of behavioral spread. Additionally, tracing the spread of violent actions through social networks is invaluable information for public health and medical professionals to focus on working on rerouting and halting pathways of transmission.[97]

Tapping into networks can interrupt the spread of violent behavior. Studies have evidenced that analysis and action with social networks create space for there to be interventions and subsequent change of network behavior to non-violent actions over short periods of time.[98] Therefore, harnessing and using such networks could help promote and maintain behavioral change. This may involve changing the structure or functioning of existing networks or the purposeful development of new social networks or ties. Furthermore, analyses of interventions that take explicit account of previously unobserved social networks may better uncover mediators and pathways of initiation and maintenance of behavior change.[99]

---

[95] Smith et al., "Social Networks and Health," 405.
[96] Fleisher et al., "Social Networks and Violence," 520-521.
[97] Green et al., "Modeling Contagion Through Social Networks…" 327.
[98] Hunter et al., "Hidden Social Networks in Behavior Change Interventions," 513.
[99] Ibid., 513.

Chapter 3: The Components of US Law Enforcement and the Prison-Industrial Complex

Introduction

Currently, the US has two main measures in place to react to and control violence: law enforcement (also referred to as policing, or police) and correctional facilities (also referred to as the prison-industrial complex, or PIC). The police's main purposes include maintaining community safety, namely through acts of order maintenance, service, and law enforcement.[100] Order maintenance often focuses on preventing and/or stopping behaviors that could disturb others, colloquially known as "keeping the peace." Keeping the peace can cover a range of actions, some examples being preventing a fight from breaking out, helping neighbors negotiate over a barking dog, or preventing littering. Regarding acts of service, the police engage in services such as first aid, roadside car assistance, finding lost property or pets, and wellness checks. Lastly, under the category of law enforcement, police identify when the law has been violated, and subsequently identify, apprehend, and detain the perpetrator of the violated law (which is where correctional facilities become relevant). The police operate to maintain community safety and are supposed to do so through as harmless measures as possible.[101]

Law Enforcement

In the US, policing is conducted by "close to 18,000 federal, state, local and city departments, all with their own rules."[102] Combining all of these departments, as of 2018, there were 686,655 law enforcement agents in the country.[103] All departments have different operating protocols, follow different regional laws, and engage in different training programs. "There is no universal standard for the structure, size, or governance of police departments in the United

---

[100] Michael Parker Banton et al., "Police," in *Encyclopædia Britannica* (Encyclopædia Britannica, Inc., September 12, 2019).

[101] George F. Cole, Christopher E. Smith, and Christina DeJong, *The American System of Criminal Justice*, 13th ed. (Toledo, OH: Wadsworth Publishing, 2012).

[102] Bernd Debusmann, "The Race Problem in Black and White," Chatham House, 2016.

[103] Erin Duffin, "Number of law enforcement officers in the U.S. 2004-2018," *Statista*, September 30, 2019.

States."[104] The most widespread practice of police officers is to perform their roles in a way that protects everyone's constitutional rights.

Correctional Facilities

Correctional facilities operate to interact with and detain individuals who have been convicted of violating the law. Individuals awaiting trial are often detained and must stay in jails operated by local governments. Additionally, when individuals are sentenced to a short period of incarceration, they stay in jails. When individuals are incarcerated for longer periods of time, or for life, they are held in prisons, which are either privatized or operated on a state or federal level. To simplify, prisons can be described as buildings or systems that house people who have violated the law, as punishment. The punishment operates via the deprivation of civil liberties, such as autonomy, material comforts, and personal security.[105]

Theories of Punishment and Carcerality

The phrase "correctional facility" is an umbrella term representing jails, prisons, or other places of incarceration by government officials.[106] Correctional facilities were developed on theories of punishment of criminality, as well as rehabilitation, deterrence, and incapacitation. The rehabilitative aspect focuses on changing individuals' lives in a way that will make them "productive members of society" upon release. In well-funded facilities, vocational and educational programs are offered, as well as substance use disorder management and emotion-focused counseling.[107] Measures of rehabilitation are concerned with the nature of the incarcerated individual, as well as their well-being.

---

[104] "Policing 101: Community Relations Services Toolkit for Policing," U.S. Department of Justice (2015).
[105] Deirdre Golash, *The Case Against Punishment: Retribution, Crime Prevention, and the Law* (New York, NY: NYU Press, 2006), 2-3.
[106] "Correctional Facility Law and Legal Definition," US Legal, n.d.
[107] Golash, *Case Against Punishment*, 37.

Deterrence theory is the foundation for many penal policies and practices. It follows the belief that people make decisions based on what will give them pleasure or pain, and unless deterred, they will pursue their own desires, even if that desire is "committing crimes."[108] General deterrence theory acts upon the belief that if people see others suffering from harsh punishments, they will fear the same consequences and will not engage in the same activities that provoked those harsh punishments (for example, an exaggerated news coverage of a trial and eventual life sentence for that individual). Conversely, individual deterrence acts upon oneself, where one will experience punishment for an action and will avoid that action to avoid experiencing punishment again (for example, receiving a speeding ticket).[109] The formation of policies and practices of penality on the basis of deterrence predicates that individuals will be educated on their actions and consequences of said actions. This practice relays a message to the individual that what they did was wrong, which the individual perceives as a threat that informs the direction of their future actions.[110] Deterrence functions through threatening people with punishments in response to their actions, most often manifested in the omnipresence of police, enhancing the perception that police are there to constantly surveil, subsequently increasing the likelihood of someone being "caught" for committing a "crime."[111]

Lastly, the carceral theory of incapacitation acts with the goal of preventing "dangerous and prolific offenders" from reoffending in the community.[112] It is predicated on the idea that while imprisoned and removed from society, people cannot commit crimes. As individuals often redirect patterns of power and abuse to the people directly surrounding them while incarcerated,

[108] Kelli D. Tomlinson, "An Examination of Deterrence Theory: Where Do We Stand?" *US Courts Federal Probation* 80, no. 3 (December 2016), 33.
[109] Golash, *Case Against Punishment*, 24.
[110] Etienne Benson, "Rehabilitate or Punish?" *American Psychological Association* 34, no. 7 (2003).
[111] National Institute of Justice, *Five Things About Deterrence,* NCJ 247350, U.S. Department of Justice, May 2016.
[112] Golash, *Case Against Punishment*, 29.

incacitation acts as a medium for further perpetuation of the cycle of violence. Incapacitation

essentially works to prevent future, hypothetical acts of harm, often without a basis of evidence

that another act of harm may be committed.[113] The most extreme form of incapacitation is capital

punishment, acting on the pretense of eliminating the possibility for any more crimes or acts of

harm being committed by an individual.[114] By executing someone, the state acts to protect the

naïve society from hypothetical future (often unfounded) dangerousness committed by the

individual.[115] Incapacitation for any length of time has demonstrated to be ineffective at

preventing later offenses, as the longer one is kept in a correctional facility, the more likely that

their supportive community bonds will fracture, leaving them with little to no support system

upon re-entry to society.[116] In his study "Recidivism, Incapacitation, and Criminal Sentencing

Policy," Andrew D. Leipold argues that sentences that act to incapacitate "buy increments of

crime delay… eventually translat[ing] into fewer overall crimes."[117] Leipold summarizes that

despite this intention, "up to half of all state and federal inmates are reconvicted of a crime after

their release"[118] though this recidivism rate varies greatly when considering type of crime and

demographics of the "re-offender," such as age and gender.[119] A nine-year long Bureau of Justice

Statistics study (2005-2014) of state "prisoner" recidivism rates, looking at the recidivism rates

of the 401,288 people who had been released in 2005, found that over the nine-year period, there

were an average of five arrests per "released prisoner." "An estimated 68% of released prisoners

---

[113] Marijke Malsch and Marius Duker, *Incapacitation: Trends and New Perspectives*, (Farnham: Taylor & Francis Group, 2012). Accessed January 2020, ProQuest Ebook Central, 2.
[114] Ibid., 2.
[115] Ibid., 47.
[116] "Prison Time Served and Recidivism," Pew Charitable Trusts, October 2013.
[117] Andrew D. Leipold, "Recidivism, Incapacitation, and Criminal Sentencing Policy," *University of St. Thomas Law Journal* 3, no. 3 (2006), 543.
[118] Ibid., 553.
[119] Ibid., 555.

were arrested within 3 years, 79% within 6 years, and 83% during years 4 through 9."[120] Looking at that data, I believe that incapacitation is an inadequate basis of punishment, especially considering its supposed partnering with rehabilitation. Incapacitation is a largely unbacked, unproven theory that is used to justify the unjust length of sentences of the 2.3 million people who are currently confined nation-wide.[121]

Police Abuse of Power

Contrary to the duties outlined in various police departments across the country, including the overarching goal to maintain everyone's constitutional rights, there has historically been a profusion of incidences of police abuse of power exercised over non-police. Police abuse and violence occur at great rates, but the majority of harm and misconduct go unreported. This under-reporting is likely due to fears of not being taken seriously, fears of retaliation, and beliefs that police will not be held accountable. There are three major government databases monitoring police killings and abuse: the National Center for Health Statistics of the Centers for Disease Control and Prevention, which documents all deaths in the US (and has a category for "legal interventions" within NVSS – National Vital Statistics System), the Federal Bureau of Investigation's (FBI) Supplemental Homicide Reporting System, which monitors police-reported "justifiable homicides," and the Bureau of Justice Statistics (BJS) program accruing data on arrest-related deaths (ARDs), which has included homicides by police in its system since 2003.[122] Despite what seems like a comprehensive set of systems for accountability and data of police homicides and abuse, it is important to note that reporting began in the early 2000s, and today, these systems receive their data through <u>voluntary</u> reports provided by police departments

---

[120] Mariel Alper, Matthew R. Durose, and Joshua Markman, *2018 Update on Prisoner Recidivism: A 9-Year Follow-up Period*, Bureau of Justice Statistics. NCJ 250975, U.S. Department of Justice, May 2018.
[121] Sawyer and Wagner, "Mass Incarceration: The Whole Pie 2020."
[122] Zimring, 24.

and other law enforcement agencies.[123] Additionally, there is no system in place to audit this data, if agencies choose to report.[124] Subsequently, the combinations of the three above government databases have consistently under-reported incidences of police homicides, usually reporting at a rate of 50% of the actual number.[125] The more comprehensive data is compiled through various grassroots, independent reporting systems, with data coming from the government reports as well as through word of mouth and the media.[126] As of the end of 2019, there are no conclusive, agreed upon data points regarding the number of police homicides that occurred this year. There are no government publications yet analyzing data from 2019, but the FBI reports 410 "justifiable homicides" in 2018.[127] In 2018, grassroots sources reported an estimated 992 people who were shot and killed by police – nearly 600 more reports than government sources.[128,129]

Though the above data is specific to police homicides, it shines a light on the fact that other incidences of police violence, whether physical, mental or emotional, go largely unreported. Police brutality is a national crisis, and it needs to be addressed at a much higher caliber. The considerably broad presence of officers in communities creates a culture of fear through surveillance. This fear is maintained through officers' authorization to use force to stop incidents before they have even occurred. A prolific and publicized example of this tactic is stop-

---

[123] Ibid., 27-28.
[124] Ibid., 5.
[125] Ibid., 30.
[126] Ibid., 32-33.
*I use the term "grassroots" here to indicate that these sources are not governmental, nor funded by the government.
[127] "Justifiable Homicide by Weapon, Law Enforcement, 2014-2018," Federal Bureau of Investigations, Uniform Crime Reporting, Criminal Justice Information Services Division, 2018.
*In this dataset, a "homicide" is defined as "the killing of a felon by a law enforcement officer in the line of duty."
[128] "2018 Police Shootings Database," *The Washington Post*, 2018.
[129] "Killed By Police 2018," Killed By Police, 2018.

and-frisk,[130] predicated on profiling individuals and monitoring social interactions, leading to

discrimination-based (particularly by race and class) violent encounters initiated by police.

Police also frequently perpetrate sexual violence through non-consensually searching the genital

areas of individuals they have detained.[131] Experiencing these types of police violence has been

linked to increased risk of physical and mental illness, especially an elevated risk of suicidal

attempts and ideations (Figure 2).[132]

Fig. 1 Prevalence of suicide attempts (**a**) and suicidal ideation (**b**) by categories of police victimization exposure in the entire sample. All unadjusted chi-square comparisons between police victimization exposures and both suicidal ideation and suicide attempts were significant ($p < 0.05$)
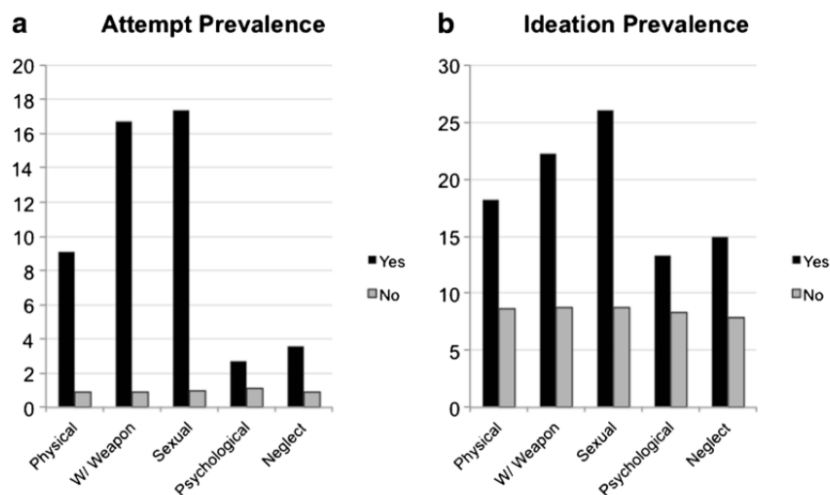
Figure 2. Graphs (a) and (b) demonstrate the heightened risk of attempting and thinking about attempting suicide after police victimization, sorted by type of police victimization.

The effects of police violence are experienced disproportionately by communities of color, and

other marginalized groups determined by various factors including but not limited to race, sex,

gender, religion, substance dependency, disability, and class.[133]

Exposure to Violence During Incarceration

Data and information on correctional facilities have exhibited patterns of disproportionate

rates of victimization of prisoners (such as through assault, robbery, rape, or extortion) compared

---

[130] Hannah Cooper et al., "Characterizing Perceived Police Violence: Implications for Public Health," *American Journal of Public Health* 94, no. 7 (July 2004), 1114.
[131] Ibid., 1116.
[132] Jordan E. DeVylder et al., "Elevated Prevalence of Suicide Attempts among Victims of Police Violence in the USA," *Journal of Urban Health* 94 (May 22, 2017), 633, 635.
[133] "Police Excessive Force," American Civil Liberties Union.

to that of the general population. These reports act against the goals that correctional facilities reportedly work towards, specifically rehabilitation. Correctional facilities often expose people to more violence than they may have previously experienced on "the outside" and thus contributes to the spread of violence. Incarcerated people often experience severe isolation, to the degree of their social skills degenerating.[134] The degree of anger and brutalization encountered during periods of institutionalization is immense, and the effects are far-reaching.[135] Demetrius Buckley, incarcerated at St. Louis Correctional Facility (St. Louis, MI) wrote "Death is too common in prison to feel anything for someone who would take your life too if they had to."[136] This lived experience is reflected in the mortality rate of people incarcerated in state prisons. The mortality rate in state prisons in 2016 was reportedly 303 deaths per 100,000 people.[137] This staggering number cannot be attributed to trends of suicidality or lethal assault consistent with the US population, as those average rates are 15.3[138] and 5.0,[139] respectively.

Extreme surveillance and instances of deprivation are also reported through various personal testimonies. Jerry Metcalf, incarcerated at Thumb Correctional Facility (Lapeer, MI), stated that "The shower is the one place I'm guaranteed to find solitude, if only for ten minutes at a time."[140] Peter Inserra, formerly incarcerated at Collins Correctional Facility (Collins, NY) reported that he "[l]ost 25 lbs in 4 months eating prison food."[141] Individuals are deprived of

---

[134] Dot Goulding, *Recapturing Freedom: Issues Relating to the Release of Long-Term Prisoners Into the Community* (Annandale, N.S.W.: Hawkins Press, 2007), 93-94.
[135] Ibid., 8.
[136] Demetrius Buckley, "Prisoner to Violence," *The Marshall Project*, November 16, 2017.
[137] E. Ann Carson and Mary P. Cowhig, *Mortality in State and Federal Prisons, 2001-2016 -- Statistical Tables*, Bureau of Justice Statistics. NCJ 251920. U.S. Department of Justice: February 2020.
[138] "Suicide Rates per (100 000 Population)," World Health Organization (World Health Organization, December 27, 2018).
[139] "Stats of the States - Homicide Mortality," Centers for Disease Control and Prevention (Centers for Disease Control and Prevention, February 20, 2020).
[140] Jerry Metcalf, "A Day in the Life of a Prisoner," *The Marshall Project*, July 12, 2018.
[141] Peter Inserra, "I Lost 25 Pounds in 4 Months Eating Prison Food," The Marshall Project, May 16, 2019.

various rights beyond their suspension of civil rights, deprivation experienced through lack of food, lack of privacy, inability to exercise, lack of access to medical care, and isolation. Despite the extreme surveillance, nearly 68% of those in jails, and over 50% of those in state prisons, have diagnosable substance use disorders, compared to the 9% rate of the general population.[142] 14.5% of males and 31% of females in prison suffer from serious mental health illnesses, and most receive little to no treatment in custody.[143,144] These rates of serious mental health illnesses are much greater than the average rates in the general population, 3.2% for males, and 4.9% for females.[145] Furthermore, an estimated 72% of people in jail have co-occurring serious mental health illnesses and substance use disorders.[146]

To analogize why incarcerating people contributes to the cyclic nature of violence, I will use an example of a generic pandemic, transmitted through air. For example, if someone with a compromised immune system (someone with a history of interacting with violence) is placed in a room with people with the disease (a room of people who are presently violent/who are being deprived of their needs in a correctional facility), the person with the compromised immune system will likely contract the disease (the person with a history of interacting with violence will likely become violent or embody violent tendencies and characteristics). Providing someone with a compromised immune system with support measures, such as food, shelter, and water, will likely increase their baseline immune strength and stability, lessening their likelihood of contracting the disease than if left in a room with people with the disease. Similarly, if someone who has previously acted violently or interacted with violence is provided with support and

---

[142] "The Burden of Mental Illness Behind Bars," Vera Institute of Justice, June 21, 2016.
[143] Ibid.
[144] Christie Thompson and Elizabeth Eldridge, "Treatment Denied: The Mental Health Crisis in Federal Prisons," *The Marshall Project*, November 21, 2018.
[145] "The Burden of Mental Illness Behind Bars."
[146] Ibid.

resources, rather than placed involuntarily in a facility with other potentially violent people, their

likelihood of recidivism will decrease.[147]

Policing and Incarceration as an Initial Infection Vector

Through analyzing the actions of police and prisons in the US, the model of violence as

an infectious disease can be applied to police and carceral violence, with prisons and police

functioning as principal propelling agents. The systems of policing and restriction in the US were

flawed from their origin, predicated on inequality, white supremacy, and patriarchal ideals.

Policing and theories of carcerality can and do act as initial infection vectors for some

individuals within the larger system by perpetuating cyclical violence. Similarly, the unequal

holding on society by police and incarceration further drives the cycle of violence. I include

details on the PIC and carceral theory to exemplify the continued violence that one is subjected

to after interacting with law enforcement. The theories of carcerality outlined in this chapter are

foundational to understanding how policing operates and is justified in the US. Police have

historically acted to maintain and protect the power of people who systematically act to hurt and

intimidate others, and to maintain the power of capitalism, predicated on exploitation, creating

and perpetuating a culture of violence in the US.[148] These incidences of protecting power

---

[147] Nina Papalia et al., "A Meta-Analytic Review of the Efficacy of Psychological Treatments for Violent Offenders in Correctional and Forensic Mental Health Settings," *Clinical Psychology: Science and Practice* 26, no. 2 (April 22, 2019), 23.

[148] The following is a condensed (and thus, reductive) history of policing in the US. The first recorded variation of police was in Boston in 1636, created to function as a night watch to warn the community of any danger. This night watch acted almost solely to maintain community safety and perpetrated no violence (that has been recorded). Flash forward two centuries, and more regimented night watches grew into police forces. Boston established the first police force in 1838, with New York City, Albany, Chicago, New Orleans, and more cities closely following. In Southern states, policing developed as a means of slave control, and police were tasked to track down, apprehend, and return runaway slaves to their owners. Police also provided a form of "organized terror" to deter slave revolts, by maintaining discipline through punishing slaves who violated plantation rules. Post-Civil War, Southern police departments then slightly shifted their power to focus on controlling freed slaves (now laborers), and largely acted to enforce Jim Crow segregation. After this time, there were no major grounds nor evidence of increased crime going into the late-19th century, but an increase in what was viewed as "social disorder." This "social disorder" was euphemistic for integration and the increased influx of immigrants into the United States. Police were subsequently tasked with keeping those lower (immigrants, formerly enslaved, lower-economic status) classes "in their place."

intimately ties policing in the US to the political-economy, rather than any purported incidences

of crime.

Police acted as a force of social control of the classes perceived as "dangerous" and "inferior." Commonly, police acted to protect white, wealthy factory owners against so-called "rioting" by their workers, which were typically union strikes for better working conditions against employers, an example of police protecting those in societal power. Similarly, police acted as a force to keep "peace" during the Civil Rights Movement, which challenged "white hegemony in the South and racist social policies in the North," where they "kept peace" through exerting brutal force upon Civil Rights activists. In the late 1960s, police also worked to shut down anti-war demonstrations – anything that opposed the government and people in power.

Source: Gary Potter, "The History of Policing in the United States," Eastern Kentucky University School of Justice Studies, 2001.

Chapter 4: What can be done?

Introduction

   Violence is an epidemic, and thus a public health crisis, and the lack of accountability surrounding the crisis of police violence is incredibly dangerous. Exposure to violence increases the risk of developing other illnesses and increases the risk of premature death, despite it being possible to effectively prevent violence using health methods.[149] Like other infectious diseases, exposure to violence increases an individual's probability of adopting violent behavior themselves, which they can subsequently spread and transmit through exposing other people to violence. Violence is cyclic and generates more violence, as well as fear, distrust, and panic.[150] Therefore, it is imperative to change the mindset of "violence cannot be prevented" and approach violence like any other infectious disease, by treating it with a public health model.

   Specifically, police violence is endemic and must be addressed. Over fifty percent of police-initiated homicides go unreported; there is no comparative statistic on how much police violence goes unreported, but one may deduce that a large percentage of acts of police violence go unreported due to fears of retaliation or of not being taken seriously. According to the database "Mapping Police Violence," 1,099 people were killed by police in 2019. "Black people were 24% of those killed despite being only 13% of the population."[151] The racist pedagogy in which policing is situated is paramount in looking at these statistics. They're numbers, yes, tragic, disappointing numbers, but more importantly they're lives. Just like violence spreads through a network, grief too, spreads like an infectious disease, impacting everyone in contact with one of those people. Though grief is almost assuredly felt by the friends and families of the shooting victims, there is no accountability for the perpetrators of the violence. Of the police-

---

[149] "Addressing Violence as a Health Crisis with Health Methods."
[150] Ibid.
[151] "Mapping Police Violence," Mapping Police Violence.

initiated killings between 2013-2019, only 1% of incidents resulted in officers being charged with a crime.[152]

A public health model must be used and adapted to cure and alleviate the harms of the disease: violence. Traditional three-step public health models for approaching infectious diseases are: detecting and interrupting areas of spread, identifying and treating high risk individuals, and changing social norms.[153] Public health models have proven to be successful in reducing rates of violence in communities around the world, and I argue that the model can be expanded and adapted to address police-initiated violence as well.

The Origin of Cure Violence

Cure Violence was founded by Gary Slutkin, MD, a former head of the WHO Intervention Development Unit and Professor of Epidemiology and International Health at the University of Illinois School of Public Health. The goal of the organization is: "To reduce violence globally using disease control and behavior change methods."[154] CeaseFire Chicago was the initial program launched using Slutkin's methodology (CeaseFire was the original name of the organization, now known as Cure Violence).

Cure Violence Methodology

The organization Cure Violence is dedicated to stopping violence using a public health model, and they have adapted the three steps to fit the goal of ceasing violent actions. Cure Violence originated as an organization working to stop intra- and inter-gang gun violence and is currently working on an application of their model to stop police violence. Therefore, the steps presented may seem a bit unsuited for police violence, which I will address in a later section of

---

[152] Ibid.
[153] "What We Do," Cure Violence (Cure Violence Global, 2019).
[154] Lee-Ann Olwage, "The Interrupters," Cure Violence Global, September 2019.

this chapter. Step one is detecting and interrupting conflicts, as conflicts can function as a medium for spreading. To do this, Cure Violence works with three sub-steps, preventing retaliation, mediating ongoing conflicts, and maintaining contact to make sure new conflicts do not arise. To prevent retaliation, Cure Violence outreach workers speak to those involved in the conflict immediately after any dispute as well as their friends and family to equalize the situation and provide support. Additionally, to mediate any ongoing conflicts, they discuss open-ended disputes with all people involved such as recent arrests and prison releases, aiming to quell anxieties and anger potentially surrounding those events. Lastly, they maintain this contact with all people involved in the conflict for as long as necessary to keep communication and support channels open to prevent conflicts from recurring.[155]

The second step focuses on identifying and treating those at high-risk of contracting violent behaviors and subsequently spreading violence. Cure Violence workers do this by gaining the trust of those at risk, discovering their needs, and providing appropriate treatment. They help individuals gain access to support they may need, whether it be social services, counseling, employment, substance misuse treatment, or leaving gangs. Additionally, they provide education on how to change behaviors by responding to highly charged situations in an alternative manner. This is done alongside discussions of the costs of violence, such as loss of their own lives, prison, or the emotional strain placed on their loved ones.

Lastly, Cure Violence strives to change social norms surrounding violence. This is done through the efforts of community mobilization, by engaging community leaders, faith leaders, family members, and more, all to commit to the message that the community does not and will

---

[155] "As long as necessary," while a vague time frame, exemplifies Cure Violence's unwavering dedication to the on-going mediation of violent conflicts. I think that having an undefined time frame acknowledges the fact that no two situations are alike, and that there cannot be a prescriptive timeline to resolving violence, rather, ongoing conversations and offerings of support.

not condone violence. To further show support of this message, the community mobilizes to respond to each and every shooting, showing constant condemnation of shootings and any form of violence.

The Cure Violence outreach workers, also known as violence interrupters, are community members that have been trained to intervene in conflicts and provide support following conflicts. The violence interrupters, particularly in the case of CeaseFire, are often individuals that had been in a gang and had since left, or had been in prison, people that were self-described as those who had "turned [their] li[ves] around, and now wanted to help others do the same."[156] Their former statuses provided them with a familiarity with gang culture, as well as a foundation of respect in interactions with clients, as they had often been in similar life situations. The violence interrupters being culturally appropriate allowed for messages to be delivered in a more well-received manner than if not. These messengers were not alienating nor threatening, and were not armed, making their interactions far more equalized than interactions with law enforcement. Additionally, that violence interrupters came from the community that they were working with made the community more apt to listen and learn than if the violence interrupters had been complete strangers to come in and "fix" a place they had never lived in. The organization's methodology provided structure and support while leaving room for violence interrupters to improvise and adapt interactions to each unique situation, leading to many successful outcomes.

CeaseFire Chicago Background

CeaseFire Chicago was operated by the Chicago Project for Violence Prevention through the University of Illinois School of Public Health. It began in 1999, expanding to twenty-five

---

[156] Wesley G. Skogan, Susan M. Hartnett, Natalie Bump, Jill Dubois et al., "Evaluation of CeaseFire-Chicago," National Institute of Justice and Northwestern University, rev. March 2009, 18.

sites at its peak function in the mid-2000s.[157] Toward the end of the 2000s, an in-depth analysis of the program was performed by a team of researchers from the National Institute of Justice and Northwestern University (hereafter referred to as the NIJ/NU analysis). They reported that by the end of the program, that "violence was down by one measure of another in most of the areas that were examined in detail."[158] There were significant shifts in gang homicide patterns, as well as declines in gang involvement in homicide and retaliatory killings.

The program's main goal was a shift in behavior change, focusing on stopping shootings and killings, while not placing an emphasis on demanding that clients "go straight."[159] Outreach workers attempted to help clients with the current conflicts that they were facing in their lives, and risk management was employed with an emphasis on harm reduction, rather than personal redemption in response to those conflicts. The program emphasized three operational "levers" that could be "pulled" to halt shootings.[160] These levers were focused on norms, decisions, and risks. Outreach workers strove to change operative norms regarding violence, both in the community and when working with individual clients. They worked to provide on-the-spot alternatives to violence when gangs and individuals were making harmful behavioral decisions. This follows the ideology of violence spreading like a disease, as it is copied and implemented into an individual's response mechanisms as a learned response to situations that could be "dealt with" with violence.[161] Lastly, there was an emphasis on increasing the perceived risks of involvement in violence, as theorized by Cure Violence above, by highlighting the likelihood of

---

[157] Ibid., iii.
[158] Ibid., 7.
[159] Ibid., 8.
[160] Ibid., 9.
[161] Ibid., 13.

incarceration, injury, death, and social risks (families losing their main source of income, putting family/friends in danger, and the emotional impact of losing a loved one.)

CeaseFire Chicago Case Study Analysis

Research indicates that mobilization efforts that encourage active, vigorous intervention of violence in the defense of community norms tend to directly lead to a reduction of violence.[162] Thus, community mobilization as a response to shootings and killings and a clear message from the community on its stance regarding violence are integral to violence prevention efforts. CeaseFire manifested the re-working of community norms through engaging with residents, local businesses, clergy members, community groups, and elected officials within the community to create a unified response to violence. To show consistent support, there were marches, rallies, and prayer vigils following every shot fired, carrying the message "stop the shooting."[163] Information was spread about the resources and interventions available through CeaseFire, reverberating the community's intolerance for violence. Outreach workers also expressed the feelings of pain experienced by victims and their families as a result of the tragedy, to emphasize the emotional aspect of consequences of violence.

It is important to note that in this program, law enforcement input was viewed more as a last effort. Police were mostly requested to enforce responses to shootings and work toward stricter gun control and as a last resort, to purport the prospects of legal repercussions and incarceration.[164]

CeaseFire systematically collected data to monitor activity throughout the duration of their programs. They looked at various indicators, such as the number of shooting responses,

---

[162] Ibid., 12.
[163] Ibid., 16.
[164] Ibid., 17-19.

community events, attendance to these events, distribution of educational materials, home visits done by outreach workers, and the number of conflicts mediated. These data points were looked at alongside police crime trend data from local departments, on homicides, shootings, and assaults in CeaseFire zones and comparison zones. The analysis of this data reported the "major message… that there has been a reduction of aggravated assaults and batteries with a firearm, shootings, and killings in the CeaseFire zones."[165]

The data collected by the Chicago police department was also used to identify and eventually select sites for CeaseFire intervention. Site selection was determined by a number of measures, particularly the level of violence in the area, the community's capacity to administer CeaseFire activities, the level of political support (and subsequent funding access), and whether they could be responsible for outreach, coalition building, and public education activities within the community.[166]

The sites analyzed in the CeaseFire Chicago initiative beginning in 2000 had multiple sites. In one area of the city, ten out of eleven sites were made up of more than 80% African-American residents.[167] In another area, there was a collection of six predominantly Latinx sites.[168] In the last sector, there were five sites qualified as "diverse" in racial makeup.[169] The unifying factors between all of the sites included a majority of residents living under the poverty line, as well as similar statistics on gun murders and shootings (aggravated assault and battery) per 10,000 residents.[170]

---

[165] Ibid., 19.
[166] Ibid., 26.
[167] Ibid., 29.
[168] Ibid., 36.
[169] Ibid., 39.
[170] Ibid., 31.

The NIJ/NU analysis went over a few common issues presented in site and host selection. Some high-need areas were unable to establish CeaseFire program sites because there were no local host agencies able to act as a base for a CeaseFire office.[171] Additionally, because the program was run on grants, funding was a large deciding factor. Some sites had strong community-based organizations and active political representatives that were better equipped to gain CeaseFire's attention while also being able to provide more substantive funding. Sites that had faith-based hosts were occasionally unsuccessful, because there was (though not in every scenario) pressure for religion and church-membership pushed onto clients, which, in some cases, turned clients away from CeaseFire services altogether.[172] Lastly, there was not enough training provided for all outreach workers. Training was most often generalized and did not fully prepare outreach workers for every situation they could encounter while working with clients and their communities.[173]

CeaseFire Data Analysis

Data on the trends of violence in CeaseFire sites were collected over the course of 210 months, ending in June 2008.[174] These months covered the span of time from before the program's implementation, to the post-implementation program duration, and the months "post-program." The "post-program" period of time occurred during a brief funding hiatus and allowed for data to be collected when the program was temporarily suspended in some sites.[175] The average post-implementation length for sites was 68 months, though the range was between 40 to 97 months.[176] Each CeaseFire site had three or four comparison sites bordering the CeaseFire

---

[171] Ibid., 44.
[172] Ibid., 45.
[173] Ibid., 50.
[174] Ibid., 174.
[175] Ibid., 175.
[176] Ibid., 176.

area. These comparison sites best matched the CeaseFire site's demographic features and rates of gun use, and did not have CeaseFire programming.[177] Seven sites in total were analyzed for the majority of the report as the data on those seven sites spanned pre-implementation, post-implementation, and post-program, as other programs were not affected by the funding hiatus in 2008, and therefore did not have any post-program data.

In the analysis, killing was defined as a homicide involving a firearm. At the time of this study's publication, 72% of homicides in Chicago involved a firearm**.**[178] Another data point measured was "shots fired" incidents, which were identified by the Chicago police as aggravated assaults and aggravated batteries. In the shots fired analysis, data reflected that shootings in the Southwest site declined significantly after the introduction of the program, even relative to a decline noticed in the area before that point.[179] In four total sites, changes in shots fired were statistically significant after the introduction of CeaseFire, trends that were described as "instant and persistent." A fifth site experienced statistically significant changes described as "gradual and persistent." All of these sites experienced declines in shots fired ranging between 14 and 22 percent (See Appendix, Table 1).[180] I found that these numbers reflected CeaseFire's goal – though not a total resolution, there was a decrease in shootings, thus a lessening of violent action, as a result of the program being introduced.

In an analysis of CeaseFire's impact on persons shot, five out of seven sites experienced a statistically significant decline in persons shot, with the decline ranging from 18 to 28 percent. Out of these five, three declines were declared as attributed to CeaseFire, while the other two

---

[177] Ibid., 177.
[178] Ibid., 177.
[179] Ibid., 179.
[180] Ibid., 181.

were "probably not," as there were similar declines in their comparison areas (See Appendix, Table 2).[181]

The analysis also looked into the effects of CeaseFire on geographical patterns of shootings in the same seven sites. These geographical renditions were analyses of "hot spots," or certain areas with a high density of shooting patterns. In four of the sites, there were decreases in the size and intensity of shootings linked to CeaseFire's introduction to the area.[182] Other hot spots also experienced decreases in size, but it was indeterminate whether that was due to the program or not. I think the lack of certainty can be attributed to the variance in data collection and in site characteristics. It was important to analyze and map the hot spots as they demonstrated whether or not the concentration of shooting rates actually decreased, or if shootings relocated to other areas. One site, Auburn-Gresham exemplified CeaseFire's effects on the geographical shooting patterns. The hot spot shrank (though still present two years post-implementation of CeaseFire) and the "cooler" areas expanded more quickly in CeaseFire sites than in comparison sites (See Appendix, Figures 3 and 4). These effects are demonstrative of CeaseFire's ability to disrupt geographical patterns of shootings (See Appendix, Table 3).[183]

CeaseFire: Gang Violence

The last part of the report focuses specifically on gang networks, performed through the analysis of social networks. This was done to understand which gangs were engaged in patterns of institutionalized conflict as well as to assess the extent of which there may have been any changes in the structure of gang homicides in CeaseFire sites in comparison to their matched comparison sites.[184] Four measures were used to analyze the effects of CeaseFire on gang

---

[181] Ibid., 183.
[182] Ibid., 193.
[183] Ibid., 203.
[184] Ibid., 206.

homicide patterns: change in network density, degree of centrality, degree centralization, and reciprocity. Network density observations were based on the homicides reported within a network in proportion to all of the possible ties within the network, which effectively measured the overall activity of the network. The degree of centrality focused on the amount of activity of individual gangs within the network, while the degree centralization measure looked at how much of the total distribution of activity was concentrated between a small number of gangs within the supranetwork. Lastly, reciprocity measured the "bi-directional exchange of murders between gangs."[185] In reflecting on this section of the report, I think that it would have been interesting if not just inter-gang homicides were looked at, but instead, all potential violent interactions. That being said, I think it would be incredibly difficult to map all potential violent interactions, as I believe the data would not be reported in a methodical style similar to that of homicide reports.

To create the visualizations of the initial gang homicide networks, data was taken from Chicago homicide records made between 1994 and 2006.[186] Data points were coded based upon the situation leading to the homicide, whether motive-based (motivated by gang activity) or member-based (any homicide including a gang member). Though decreases in gang-motivated homicides were noted in four of the seven sites, there was no statistically significant evidence to back these decreases. The decreases could be due to a variety of reasons, but it is important to note and connect the lack of statistical significance to the small number of gangs analyzed within each site and comparison site. Auburn-Gresham experienced the largest comparative decrease in gang activity and gang homicide relative to its comparison site. There was a decrease in density network and degree centralization, though not statistically significant. Two inter-gang conflicts

[185] Ibid., 207.
[186] Ibid., 208.

appeared to have completely dissipated during the post-CeaseFire introduction period.[187] There

were no reciprocal murders after CeaseFire began, breaking that aspect of the cycle of violence.

It is also important to note that these two networks, the CeaseFire and comparison, were

structurally different, which also may have affected the data analysis. Despite these potential

flaws in the data, all-in-all, the CeaseFire sites experienced statistically significant decreases in

total homicides, and non-significant drops in gang homicides (See Appendix, Figure 5). I think it

can be "easy" or second nature at some point, to some of us who read a lot of "hard science"

research reports, to discount and overlook any data or results that are not statistically significant.

Throughout reading this lengthy analysis, I caught myself a few times skimming through data

after reading the words "statistically insignificant." After recognizing that I was doing that, I

made sure to re-read, and re-read again, as the data still is valuable and real, representing

tangible changes in communities; whether attributable to CeaseFire's program or not, these drops

in homicides, in shootings, in gang activity, are all incredibly important as they demonstrate less

harm carried out, and fewer lives lost.

CeaseFire Outcomes

The summative impact on CeaseFire on violent trends in the seven sites can be viewed in

the appendix (Tables 4 and 5). Overall, there were mixed results, but some extremely successful,

program-related decreases in shots fired and persons shot. Some data indices were more distinct

and significant than others. Decreases were experienced in all three categories, shots fired,

persons shot, and gun homicides, except for the data point on gun homicides in Englewood,

which was positive.[188] Looking at the summary presented in Table 5, there were overall

decreases in violence in most aspects of each site. The NIJ/NU team concluded that "Overall, the

---

[187] Ibid., 210.
[188] Ibid., 219.

program areas grew noticeably safer in six of the seven sites, and we concluded that there was evidence that decreases in the size and intensity of shooting hot spots were linked to the introduction of CeaseFire in four of these areas."[189]

Relevance to Police Violence

How is this all relevant to police violence? Drawing upon the assertion made in Chapter Two, that police forces function as gangs, and can be classified as such, I believe that Cure Violence's public health approach to reducing violence can be applied successfully to police violence. If individuals and networks (gangs) can be "treated for violence," police officers and police forces can be too. Police are not military – they are civilians and can and should be treated and upheld to the same expectations as other civilians, rather than be absolved of accountability for their acts of harm.

While doing research on Cure Violence as an organization and violence prevention as a practice, I reached out to them to see if there had been any moves to address police or law enforcement violence. Unfortunately, at this point, there have been no developments of that sort (but I was assured it was on their minds). Though a little disappointing, the discovery left me with a lot of room for creativity in trying to adapt Cure Violence methodology to responding to police violence.

My dream program would be instituted in every law enforcement agency in the US (and maybe even someday, the world!). Each location would have an employee specifically dedicated to responding to violent incidents perpetrated and experienced by members of the department. This employee would (ideally) be a social worker of sorts, trained to hold everyone accountable and to provide support, similar to a violence interrupter. The violence interrupter's presence and

---

[189] Ibid., 237.

actions would serve as regular reminders to the police department that as people in power, their actions highly visible, and their acts of harm must be addressed and stopped. After any incident of an officer shooting someone, or any use of force, in any context, there would be department-wide discussions and acts of accountability as a response to that act of harm. Involving the entire department is reminiscent of including entire communities after a community member enacts or experiences harm. Including many people also makes it evident how violence impacts oneself and one's community, even if the perpetrators themselves do not experience the direct effects. Additionally, it shows that the response will be maintained and will happen after each and every incident, demonstrating continuous responsible accountability practices. This commitment will also illustrate that violence is not just harmful one-on-one, but feeds into the cycle of violence. Dedicating the necessary time to accountability and education on tactics that are not based on physical force will equip officers with new tools to manage situations. Significant reductions in police-initiated killings have been recorded upon department-wide bans on excessive force and replacements of those tactics with non-violent (or less violent) practices, especially mandating officers to use all other means before shooting, which has shown to lead to a 25% decrease in police-initiated shootings. Solely requiring that all acts of force be reported has led to an identical decrease in police-initiated shootings (Figure 6).[190]

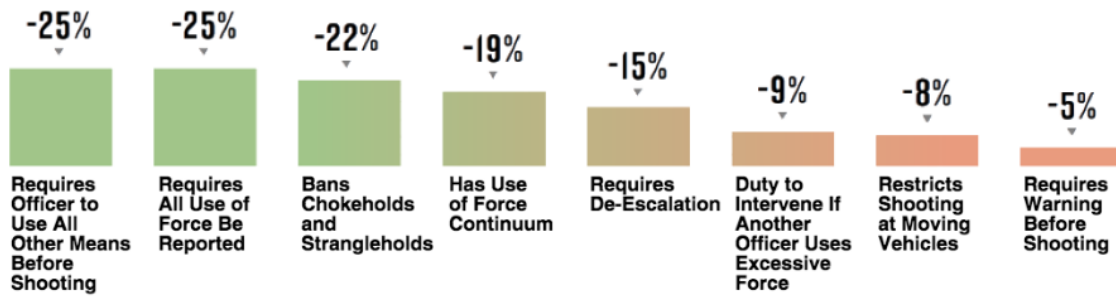[190] "Mapping Police Violence." Mapping Police Violence.

Figure 6. *Percent fewer police killings in police departments that implemented policies of using all other means before shooting.*

Education on cultural literacy would also be integral to this program, especially the acknowledgement and effort towards learning about marginalized communities who disproportionately experience police violence, particularly black communities, indigenous communities, communities of color, as well as queer communities and queer communities of color. Equipping community members with the ability to educate officers in their communities could serve as a mutually empowering method of collaboration toward disrupting violence patterns.

Why and How Public Health Can Reduce Violence

The analyses of CeaseFire's impacts on these Chicago sites (as well as the 50+ sites in the US, 8+ sites in Latin America, 10+ in the Middle East and North Africa, 5+ in Central and South Africa, and Europe)[191] indicate that a public health, disease-control approach to reducing violence works. Nonviolent resolutions of disputes reduce the opportunity for violent responses to conflicts, and thus a lesser probability of violence exposure and spread. The implementation of programs like Cure Violence in healthcare facilities has also proven to be incredibly helpful in starting the process as early as possible when gunshot victims enter hospitals for treatment.

---

[191] "Where We Work," Cure Violence, Cure Violence Global, 2019.

Healthcare professionals possess empathy and care techniques that law enforcement agents do not have (while on duty), and they are trained to treat and end the spread of infectious diseases.[192] Treating an infectious disease like an infectious disease, rather than a moral battle, will produce results.[193] Violence affects everyone's health negatively, and is not something that occurs because people are "bad or immoral."[194] Violence occurs most often because of adverse experiences people are exposed to throughout their lives, such as (but not limited to) systematic racism, poverty, mass incarceration, and police brutality, all of which lead to more exposure to violence and subsequent transmission.[195] By interacting all individuals affected by violence in a way similar to that of anyone who contracts a disease is treated emphasizes that treatment of disease works and punishment does not drive behavior or behavioral change, contrary to the notion focused on (and profited upon) in the US today.[196] Lastly, this method is accessible, and these materials and supports are accessible. Reframing violence as a disease and treating individuals (and populations) to cure the disease can be done with grassroots efforts, from anywhere in the country (and world).

---

[192] "Addressing Violence as a Health Crisis with Health Methods," Cure Violence Global.
[193] "The Big Idea." Cure Violence.
[194] Ibid.
[195] Ibid.
[196] Jamie Chamberlin, "Crime and Punishment," *American Psychological Association* 40, no. 9 (October 2009), 52.

Conclusion: Where do we go from here?

In the US, violent behavior is popularly viewed as an individualistic problem, reflective of morality and personal choice. However, it is important to emphasize and give credence to the fact that violence is a behavior, and thus, as a behavior, is infectious. Whether we are conscious of it or not, violence is omnipresent in our society, constantly being spread like all biologically infectious disease: through repeat contact and exposure. American complacency with violence, paralleled with our upbringings amongst violent media and violent interactions themselves, makes it difficult to identify where the infection originates, and where it may end. What I hoped to address in this thesis is that the specific origin is unidentifiable, but at large can be attributed to systemic oppression, particularly racism and heteropatriarchal ideals, manifested in the US as law enforcement and correctional facilities. The constant presence of police in our communities, and their ability to act violently without accountability is a major factor leading to one's exposure to violence and violent behavior, perpetuating the cycle of violence.

As violence is like an infectious disease, it can and should be treated like biological infectious diseases, with a public health approach. The public health organization Cure Violence, dedicated to violence prevention, outlines such a disease-control method in three steps: identifying present infections and providing treatment, identifying and treating high-risk individuals, and changing the environment to prevent further spread or reoccurrence.[197,198] These steps parallel those presented by the WHO in regard to infectious disease control and are similarly successful at preventing violence.

Likening US police forces to gangs, as both are groups that commit violence, provides a context through which Cure Violence's method can be applied. Analyses of Cure Violence's first

---

[197] Ameli, "Communicable Diseases and Outbreak Control," 21.
[198] "What We Do," Cure Violence.

program, CeaseFire Chicago, indicate the benefits and successes attributed to treating violence with a care-centered public health model. Furthermore, it demonstrates the ability to apply the Cure Violence approach to gang violence, setting the stage for me to present my adaptation of the model, targeting police forces and police violence. Creating a system of accountability and support for everyone who experiences or commits acts of violence is important, but implementing such a system at a center of power and control in the US – law enforcement – is paramount. Holding officers accountable for each and every act of violence, every single shot fired, has the potential to change policing, promoting acts of non-violence and training officers to exhaust all other means before exercising any use of force, thus saving innumerable lives, particularly the lives of young black and brown men. Teaching practices of care and accountability and heightening the awareness of the effects of violence to the people who perpetrate it have the potential to change this oppressive system.

The phasing-in of public health approaches dedicated to decreasing violence could lead to a phasing-out of the US's prison-industrial complex and police state. This public health approach is humanity-centered and in the economic interest of the country. The divestment of the government from prisons and police can save billions; the US spends on average $182 billion annually on the system of mass incarceration[199] – approximately one in fifteen state general fund discretionary dollars.[200] The redistribution and rerouting of this immense amount of money could open up access to funds for countless new programs and supports while also providing a successful, harm-reductive way to curb violence.

[199] Peter Wagner and Bernadette Rabuy, "Following the Money of Mass Incarceration," Prison Policy Initiative, January 25, 2017.
[200] "Fiscal Cost of Mass Incarceration," American Civil Liberties Union, n.d.

It is important to acknowledge that in treating violence as an infectious disease, there runs the possibility of interventions devolving into practices conducive to carceral logic. Historically (and presently), the US has treated those with infectious diseases very poorly, oftentimes resulting in infected individuals being isolated and quarantined, reminiscent of incarceration. In my ideal actualization of this public health process, carcerality would be eliminated, and care would be provided in supportive, consensual ways, exercising immense efforts to ensure no one's rights are being infringed on, and that people are given room to grow on their own terms. Additionally, by staffing these initiatives with health care providers and social workers, rather than police or correctional officers, I would hope that each interaction would occur in a way that centers survivors of violence and their experiences, while simultaneously holding whoever committed harm accountable.

Centering care has the potential to change the cyclic nature of violence in the world. The recognition that state-initiated (police and carceral) violence sparks other violence (which in turn triggers more violence) can lead to increased societal accountability and supports, thus prompting systemic changes in our responses to violence. Making public health practices integral to policing could eventually lead to the mitigation of policing as an institution, allowing for resources to be redirected to provide care and supports in the communities most affected by state violence, and eventually an expansion of this support nationwide. Equipping those who commit harm with support services first, opposed to subjecting them to carceral violence, is integral to disrupting patterns and flows of violence, and those in positions of power in society – police – have the capability and responsibility to initiate this disruption. Violence is cyclical; whether one experiences or inflicts violence, it spreads through webs of interaction, infecting all those who come into contact with it. It is crucial for those who perpetrate violence to be held accountable,

especially those in power, to fracture this cycle permanently. Violence cannot and will not end violence, what is needed to end violence is radical care and love. I'd like to close with an excerpt written by radical abolitionist and revolutionary Assata Shakur, from her autobiography: *Assata*. Her words emanate the essence of non-violent practices, of care, of peace, and the belief that "r/evolution is love."

> "this is the 21st century and we need to redefine r/evolution. this planet needs a people's r/evolution. a humanist r/evolution. r/evolution is not about bloodshed or about going to the mountains and fighting. we will fight if we are forced to but the fundamental goal of r/evolution must be peace.
>
> we need a r/evolution of the mind. we need a r/evolution of the heart. we need a r/evolution of the spirit. the power of the people is stronger than any weapon. a people's r/evolution can't be stopped. we need to be weapons of mass construction. weapons of mass love. it's not enough just to change the system. we need to change ourselves. we have got to make this world user friendly. user friendly.
>
> are you ready to sacrifice to end world hunger. to sacrifice to end colonialism. to end neo-colonialism. to end racism. to end sexism.
>
> r/evolution means the end of exploitation. r/evolution means respecting people from other cultures. r/evolution is creative.
>
> r/evolution means treating your mate as a friend and an equal. r/evolution is sexy.
>
> r/evolution means respecting and learning from your children. r/evolution is beautiful.
>
> r/evolution means protecting the people. the plants. the animals. the air. the water. r/evolution means saving this planet.
>
> r/evolution is love."
>
> — Assata Shakur

Appendix

Figure 1. *A selection of data exemplifying the racial gap in US police departments, with concentrations of white officers most often much higher than the concentration of white people in the population.*[201]

---

[201] Jeremy Ashkenas and Haeyoun Park, "The Race Gap in America's Police Departments," The New York Times (The New York Times, April 8, 2015).

Summary of ARIMA Estimates of CeaseFire's Impact on Shots Fired

CeaseFire Site	trend in program area	percent decline	due to the program? (contrast with comparison area)
Auburn Gresham	gradual and persistent	– 16%	Yes; decline in the comparison area was insignificant
Englewood	insignificant		decline in the comparison area was also insignificant
Logan Square	instant and persistent	– 21%	Yes; decline in the comparison area was insignificant
Rogers Park	insignificant		comparison area decline also insignificant; shooting levels low and not much change
Southwest	instant and persistent	– 20%	Yes; decline in the comparison area was insignificant
West Garfield Pk	instant and persistent	– 22%	Probably; program area decline was more than twice that in the comparison area
West Humboldt Pk	instant and persistent	– 14%	Probably not; program area decline was similar

Table 1. *Summative estimates of CeaseFire's impacts on shots fired in various program sites.*[202]

---

[202] Skogan et al., 182.

Summary of ARIMA Estimates of the CeaseFire's Impact on Persons Shot

CeaseFire Site	trend in program area	percent decline	due to the program? (contrast with comparison area)
Auburn Gresham	gradual and persistent	− 21%	Yes; decline in the comparison area was insignificant
Englewood	insignificant		comparison area decline was also insignificant
Logan Square	instant and persistent	− 19%	No; similar decline in the comparison area
Rogers Park	insignificant		comparison area decline was also insignificant; shooting levels low and not much change
Southwest	instant and persistent	− 23%	Yes; decline in the comparison area was insignificant
West Garfield Park	instant and persistent	− 28%	Yes; decline in the comparison area was insignificant
West Humboldt Park	instant and persistent	− 18%	Probably not; program area decline was similar

Table 2. *Summative estimates of CeaseFire's impact on persons shot in various program sites.*[203]

[203] Skogan et al., 183.

Figure 3. *Decrease in shooting hot spot densities in Auburn-Gresham.*[204]

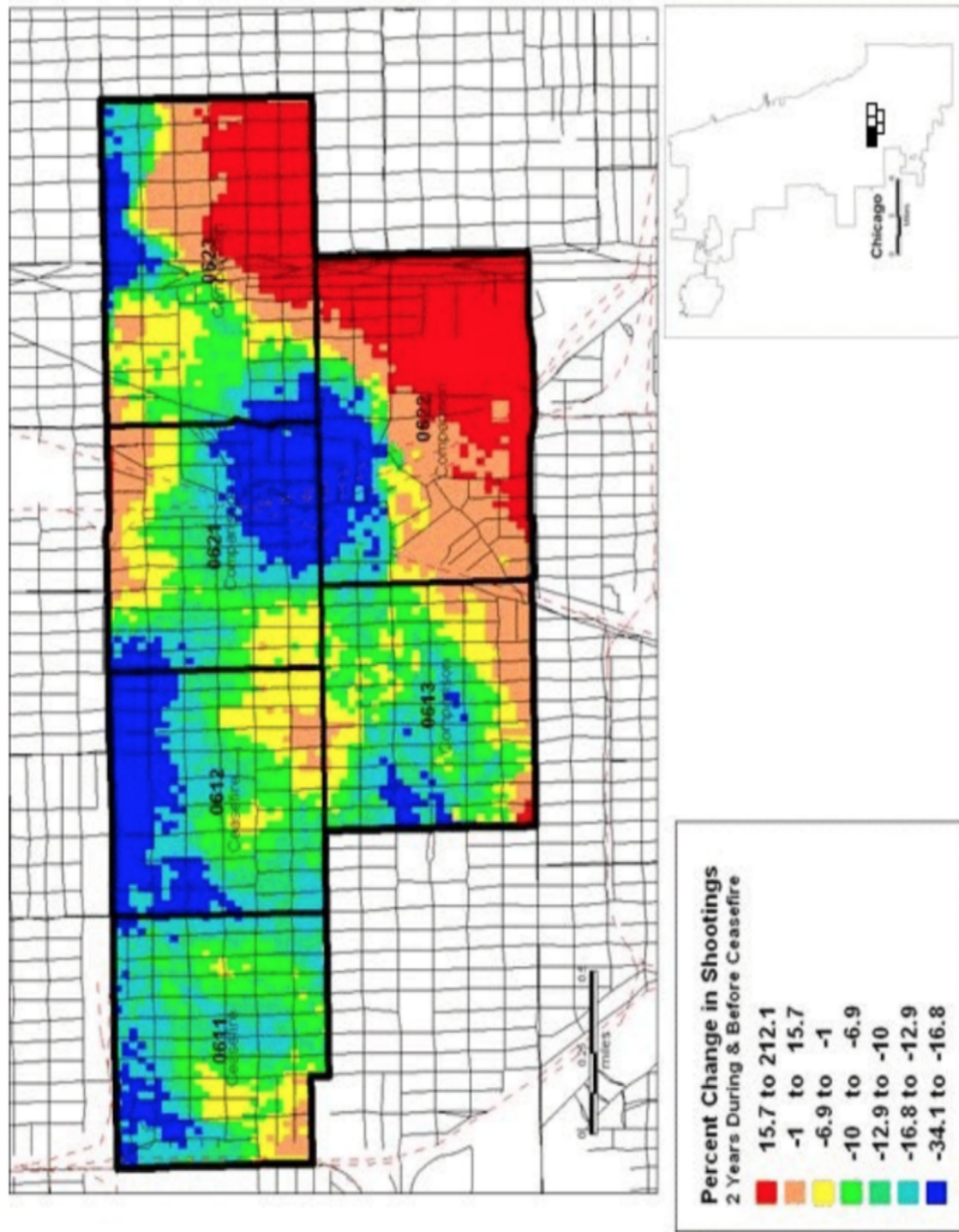
[204] Skogan et al., 196.

Figure 4. *Percentage change of hot spot shooting density in Auburn-Gresham.*[205]

---

[205] Skogan et al., 197.

Summary Changes in Hot Spot Patterns

	Evidence CeaseFire had a positive effect on shooting density?
Auburn Gresham	Yes, on several measures
Englewood	Inconclusive; a considerable decline in the program area but some comparable declines in the comparison; underfunded site
Logan Square	No evidence of impact; not much decline in shooting density
Rogers Park	Highly probable; problems with comparison area but relatively large declines in program area hotspots
Southwest	Inconclusive; some evidence of impact
West Garfield Park	Yes, on several measures
West Humboldt Park	Yes, on several measures

Table 3. *Summative changes of CeaseFire's effects on shooting density in multiple program sites.*[206]
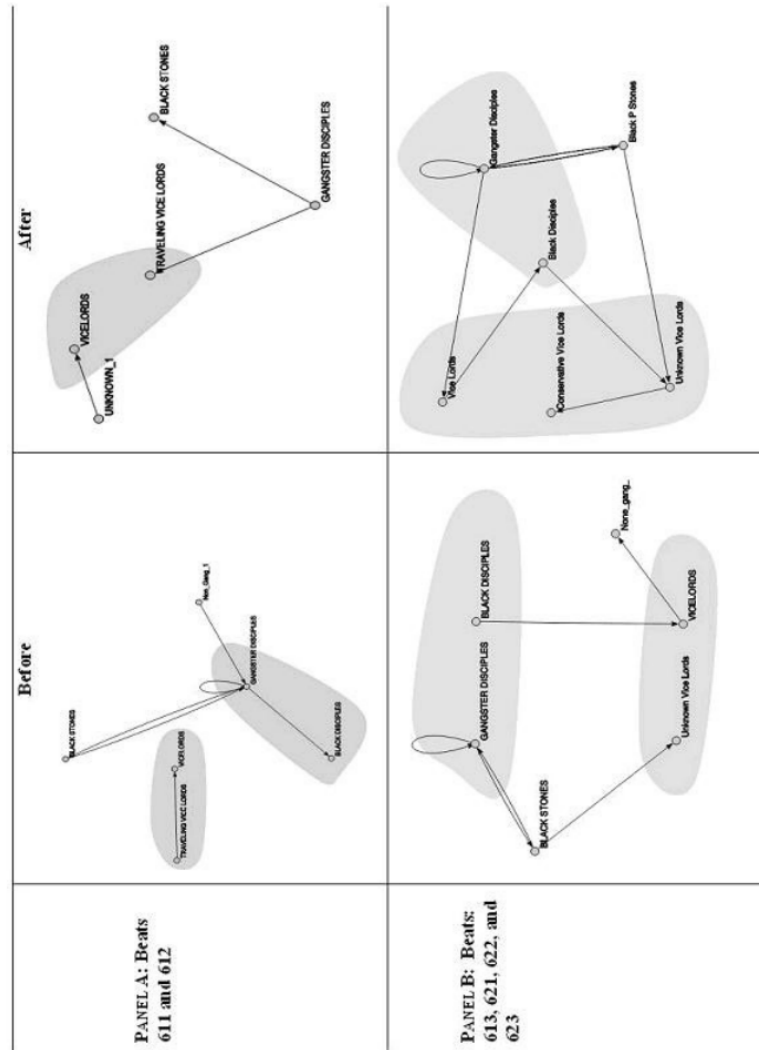
[206] Skogan et al., 203.

Figure 5. *Changes in gang networks in Auburn-Gresham, before and after CeaseFire. Note: multiple inter-gang conflicts dissipated, and there were no reciprocal murders after the program began.*[207]

---

[207] Skogan et al., 212.

Summary Impact of CeaseFire on Trends in Violence

	Shots Fired		Persons Shot		Gun Homicides	
	Change in Target Area	Due to the Program?	Change in Target Area	Due to the Program?	change in Target Area	Due to the Program?
Auburn Gresham	-42%	-16%	-61%	-21%	-52%	Yes
Englewood	-27		-41		+41	
Logan Square	-40	-21%	-43		-16	
Rogers Park	-66		-73		-74	
Southwest	-35	-20%	-52	-23%	-92	
West Garfield Park	-42	-22%	-47	-28%	-43	
West Humboldt Park	-42		-43		-14	

Table 4. *Summative impacts of CeaseFire program on violent trends in various sites.*[208]

Summary of Three Approaches to Impact Analysis

	Changes in Violence Due to the Program		
	shootings down[a]	hot spots cooler	gang homicide decline
Auburn-Gresham	−16/− 21%	−15%	gang involvement in homicide down reciprocal killings down
Englewood			
Logan Square	−21%		gang involvement in homicide down reciprocal killings down
Rogers Park		−40%	
Southwest	−20/−23%		gang involvement in homicide down
West Garfield Park	−22/−28%	−24%	reciprocal killings down
West Humboldt Park		−17%	
East Garfield Park	not evaluated		reciprocal klllings down gang involvement in homicide down

Note: [a] Two measures: all actual and attempted shootings, and all persons shot or killed; gun homicide alone also lower in Auburn-Gresham due to the program

Table 5. *Summary of specific impacts of CeaseFire on changes in violence due to the program, in various sites.*[209]

---

[208] Skogan et al., 219.
[209] Skogan et al., 237.

Bibliography

"Addressing Violence as a Health Crisis with Health Methods." Cure Violence Global, January 2017. https://cvg.org/wp-content/uploads/2019/05/MovementPaper1.pdf.

Alper, Mariel, Matthew R. Durose, and Joshua Markman. *2018 Update on Prisoner Recidivism: A 9-Year Follow-up Period*. Bureau of Justice Statistics. NCJ 250975. U.S. Department of Justice: May 2018. https://www.bjs.gov/content/pub/pdf/18upr9yfup0514.pdf (Accessed February 2020).

Ameli, Jonathan. "Communicable Diseases and Outbreak Control." *Turkish Journal of Emergency Medicine*. Elsevier, March 9, 2016. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4910139/.

American Public Health Association. *Addressing Law Enforcement Violence as a Public Health Issue*. Policy Number: 201811, Nov. 13, 2018. https://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2019/01/29/law-enforcement-violence/.

Ashkenas, Jeremy, and Haeyoun Park. "The Race Gap in America's Police Departments." The New York Times, April 8, 2015. https://www.nytimes.com/interactive/2014/09/03/us/the-race-gap-in-americas-police-departments.html.

Banton, Michael Parker, Jean-Paul Brodeur, George L. Kelling, Thomas Whetstone, and William Francis Walsh. "Police." In *Encyclopædia Britannica*. Encyclopædia Britannica, Inc., September 12, 2019. https://www.britannica.com/topic/police.

Benson, Etienne. "Rehabilitate or Punish?" *American Psychological Association* 34, no. 7 (2003). https://www.apa.org/monitor/julaug03/rehab.

Bergner, Raymond M. "What Is Behavior? And so What?" *New Ideas in Psychology* 29 (2011): 147–155. https://doi.org/10.1016/j.newideapsych.2010.08.001.

"The Big Idea." Cure Violence. Cure Violence Global, 2019. https://cvg.org/the-big-idea/.

Bond, Robert M., and Brad J. Bushman. "The Contagious Spread of Violence Among US Adolescents Through Social Networks." *American Journal of Public Health* 107, no. 2 (February 2017): 288–294. https://doi.org/10.2105/AJPH.2016.303550.

Braunstein, Laura Martin, and James J. Gross. "Explicit and Implicit Emotion Regulation: A Multi-Level Framework." *Social Cognitive and Affective Neuroscience* 12, no. 10 (September 15, 2017): 1545–1557. https://doi.org/10.1093/scan/nsx096.

Buckley, Demetrius. "Prisoner to Violence." *The Marshall Project*, November 16, 2017. https://www.themarshallproject.org/2017/11/16/prisoner-to-violence.

"The Burden of Mental Illness Behind Bars." Vera Institute of Justice, June 21, 2016. https://www.vera.org/the-human-toll-of-jail/inside-the-massive-jail-that-doubles-as-chicagos-largest-mental-health-facility/the-burden-of-mental-illness-behind-bars.

Butler, Paul. "Why the Fraternal Order of Police Must Go." *The Marshall Project*, October 11, 2017. https://www.themarshallproject.org/2017/10/11/why-the-fraternal-order-of-police-must-go.

Butts, Jeffrey A., Lindsay Bostwick, and Jeremy R. Porter. "Cure Violence: A Public Health Model to Reduce Gun Violence." *Annual Review of Public Health* 36 (March 2015): 39–53. https://doi.org/10.1146/annurev-publhealth-031914-122509.

Carson, E. Ann and Mary P. Cowhig. *Mortality in State and Federal Prisons, 2001-2016 -- Statistical Tables.* Bureau of Justice Statistics. NCJ 251920. U.S. Department of Justice: February 2020. https://www.bjs.gov/content/pub/pdf/msfp0116st.pdf (Accessed April 2020).

Chamberlin, Jamie. "Crime and Punishment." *American Psychological Association* 40, no. 9 (October 2009): 52. https://www.apa.org/monitor/2009/10/rehabilitation.

"Chapter 10: Controlling the spread of infectious diseases." *Advancing the right to health: the vital role of law.* World Health Organization, 2016. https://www.who.int/healthsystems/topics/health-law/chapter10.pdf.

Cole, George F., Christopher E. Smith, and Christina DeJong. *The American System of Criminal Justice*. 13th ed. Toledo, OH: Wadsworth Publishing, 2012.

"Contagious Disease Definition." National Institutes of Health. U.S. Department of Health and Human Services. Accessed December 10, 2019. https://aidsinfo.nih.gov/understanding-hiv-aids/glossary/168/contagious-disease.

Cooper, Hannah, Lisa Moore, Sofia Gruskin, and Nancy Krieger. "Characterizing Perceived Police Violence: Implications for Public Health." *American Journal of Public Health* 94, no. 7 (July 2004): 1109–18. https://doi.org/10.2105/ajph.94.7.1109.

"Correctional Facility Law and Legal Definition." U.S. Legal, n.d. https://definitions.uslegal.com/c/correctional-facility/.

Dahlberg, Linda L., and Etienne G. Krug. "Violence - a Global Public Health Problem." In *World Report on Violence and Health*, 3–21. Geneva: World Health Organization, 2002. https://www.who.int/violence_injury_prevention/violence/world_report/en/chap1.pdf.

Data USA. "Gender Composition." Accessed April 2020. https://datausa.io/profile/soc/333050#gender.

Data USA. "Race & Ethnicity: Most Common Race or Ethnicity of Police Officers." Accessed April 2020. https://datausa.io/profile/soc/333050#ethnicity.

Debusmann, Bernd. "The Race Problem in Black and White." Chatham House, 2016. https://www.chathamhouse.org/publications/twt/race-problem-black-and-white.

"Definition and Typology of Violence." World Health Organization. Violence Prevention Alliance, November 21, 2011. https://www.who.int/violenceprevention/approach/definition/en/.

DeVylder, Jordan E., Jodi J. Frey, Courtney D. Cogburn, Holly C. Wilcox, Tanya L Sharpe, Hans Y. Oh, Boyoung Nam, and Bruce G. Link. "Elevated Prevalence of Suicide Attempts among Victims of Police Violence in the USA." *Journal of Urban Health* 94 (May 22, 2017): 629–36. https://doi.org/10.1007/s11524-017-0160-3.

Drexler, M. "How Infection Works" in *What You Need to Know About Infectious Disease.* Washington DC: National Academies Press, 2010. Available from: https://www.ncbi.nlm.nih.gov/books/NBK209710/.

Duffin, Erin. "Number of law enforcement officers in the U.S. 2004-2018." *Statista*, September 30, 2019. https://www.statista.com/statistics/191694/number-of-law-enforcement-officers-in-the-us/.

"Executions Overview." *Death Penalty Information Center*, 2020. https://deathpenaltyinfo.org/executions/executions-overview.

Fei, Dingzhou. "Stochastic Model for Emotion Contagion in Social Networks Security Based on Machine Learning." *Safety Science* 118, (October 2019): 757-762. Accessed Jan. 15, 2020. https://doi.org/10.1016/j.ssci.2019.06.004.

"Fiscal Cost of Mass Incarceration." American Civil Liberties Union, n.d. https://www.aclu.org/issues/smart-justice/mass-incarceration/fiscal-cost-mass-incarceration.

Fleisher, Mark S., and Christopher C. McCarty. "Social Networks and Violence." In *The Cambridge Handbook of Violent Behavior and Aggression*, edited by Alexander T. Vazsonyi, Daniel J. Flannery, and Matt DeLisi, 2nd ed., 513–26. Cambridge Handbooks in Psychology. Cambridge: Cambridge University Press, 2018. doi:10.1017/9781316847992.029.

Florida, Richard. "The Geography of Coronavirus." *CityLab*, April 3, 2020. https://www.citylab.com/equity/2020/04/coronavirus-spread-map-city-urban-density-suburbs-rural-data/609394/.

Golash, Deirdre. *The Case Against Punishment: Retribution, Crime Prevention, and the Law.* New York, NY: NYU Press, 2006.

Goldstein, Joseph, and Ashley Southall. "'I Got Tired of Hunting Black and Hispanic People.'"
The New York Times, December 9, 2019.
https://www.nytimes.com/2019/12/06/nyregion/nyc-police-subway-racial-profiling.html.

Goulding, Dot. *Recapturing Freedom: Issues Relating to the Release of Long-Term Prisoners
Into the Community*. Annandale, N.S.W.: Hawkins Press, 2007.

Granovetter, Mark S. "The Strength of Weak Ties." *American Journal of Sociology* 78, no. 6
(May 1973), 1360-1380. http://www.jstor.org/stable/2776392.

Green, Ben, Thibaut Horel, and Andrew V. Papachristos. "Modeling Contagion Through Social
Networks to Explain and Predict Gunshot Violence in Chicago, 2006 to 2014." *JAMA
Internal Medicine* 177, no. 3 (January 3, 2017): 326–33.
https://doi.org/10.1001/jamainternmed.2016.8245.

Hatfield, Elaine, John T. Cacioppo, and Richard L. Rapson. "Introduction and Overview." In
Emotional Contagion: Studies in Emotion and Social Interaction, 1–6. Cambridge:
Cambridge University Press, 1993. doi:10.1017/CBO9781139174138.

Hunter, Ruth F., PhD., Helen McAneney PhD., Michael Davis PhD., Mark A. Tully PhD.,
Thomas W. Valente PhD., and Frank Kee M.D. ""Hidden" Social Networks in Behavior
Change Interventions." *American Journal of Public Health* 105, no. 3 (03, 2015): 513-
516. doi:10.2105/AJPH.2014.302399.

Inserra, Peter. "I Lost 25 Pounds in 4 Months Eating Prison Food." *The Marshall Project*, May
16, 2019. https://www.themarshallproject.org/2019/05/16/i-lost-25-pounds-in-4-months-
eating-prison-food.

Janeway CA Jr, Travers P, Walport M, et al. "Infectious agents and how they cause disease."
Chapter 10 in *Immunobiology: The Immune System in Health and Disease*. 5th edition.
New York: Garland Science, 2001. Available from:
https://www.ncbi.nlm.nih.gov/books/NBK27114/.

"Jeffrey Fagan." Columbia Mailman School of Public Health. Accessed April 2020.
https://www.mailman.columbia.edu/people/our-faculty/jaf45.

"Justifiable Homicide by Weapon, Law Enforcement, 2014-2018." Federal Bureau of
Investigations. Uniform Crime Reporting. Criminal Justice Information Services
Division, 2018. https://ucr.fbi.gov/crime-in-the.u.s/2018/crime-in-the-u.s.-
2018/tables/expanded-homicide-data-table-14.xls.

Kappeler, Victor E. "So You Want To Be a Crime Fighter? Not So Fast." Eastern Kentucky
University Online: Police Studies. School of Justice Studies, February 12, 2013.
https://plsonline.eku.edu/insidelook/so-you-want-be-crime-fighter-not-so-fast.

"Killed By Police 2018." Killed By Police, 2018. https://killedbypolice.net/kbp2018/.

Kramer, Adam D. I., Jamie E. Guillory, and Jeffery T. Hancock. "Experimental Evidence of
      Massive-Scale Emotional Contagion through Social Networks." *Proceedings of the*
      National Academy of Sciences of the United States of America 111, no. 24 (June 2, 2014):
      8788–90. doi: 10.1073/pnas.1320040111.

Leipold, Andrew D. "Recidivism, Incapacitation, and Criminal Sentencing Policy." *University of*
      St. Thomas Law Journal 3, no. 3 (2006): 536–58.
      https://ir.stthomas.edu/cgi/viewcontent.cgi?article=1097&context=ustlj.

Malsch, Marijke, and Marius Duker. *Incapacitation: Trends and New Perspectives*. Farnham:
      Taylor & Francis Group, 2012. Accessed January 2020. ProQuest Ebook Central.
      http://ebookcentral.proquest.com.libproxy.vassar.edu/lib/vcl/reader.action?docID=10488
      33&ppg=1.

"Management of Noncommunicable Diseases." World Health Organization. World Health
      Organization. Accessed December 11, 2019. https://www.who.int/activities/management-
      of-noncommunicable-diseases.

"Mapping Police Violence." Mapping Police Violence. Accessed February 2020.
      https://mappingpoliceviolence.org/.

Marsden, Paul. "Memetics & Social Contagion: Two Sides of the Same Coin?" *Journal of*
      Memetics: Evolutionary Models of Information Transmission 2 (1998).
      https://web.stanford.edu/~kcarmel/CC_BehavChange_Course/readings/Additional
      Resources/social contagion/Social Contagion.htm.

Metcalf, Jerry. "A Day in the Life of a Prisoner." *The Marshall Project*, July 12, 2018.
      https://www.themarshallproject.org/2018/07/12/a-day-in-the-life-of-a-prisoner.

National Institute of Justice. *Five Things About Deterrence.* NCJ 247350. U.S. Department of
      Justice: May 2016. https://www.ncjrs.gov/pdffiles1/nij/247350.pdf.

National Research Council. *Contagion of Violence: Workshop Summary*. Washington, DC: The
      National Academies Press, 2013. https://doi.org/10.17226/13489.

"National Violent Death Reporting System (NVDRS)." Centers for Disease Control and
      Prevention. Centers for Disease Control and Prevention, November 7, 2019.
      https://www.cdc.gov/violenceprevention/datasources/nvdrs/index.html.

Olwage, Lee-Ann. "The Interrupters." Cure Violence Global, September 2019.
      https://cvg.org/wp-content/uploads/2019/09/The-Interrupters-.pdf.

"The Origin of the LAPD Motto." Official Site of the Los Angeles Police Department, n.d.
      http://www.lapdonline.org/history_of_the_lapd/content_basic_view/1128. (Reprinted
      from BEAT Magazine, December 1963).

"Overview of Noncommunicable Diseases and Related Risk Factors." Department of Health and Human Services. Centers for Disease Control and Prevention, Sept. 11, 2013. https://www.cdc.gov/globalhealth/healthprotection/fetp/training_modules/new-8/Overview-of-NCDs_PPT_QA-RevCom_09112013.pdf.

"Package of Essential Noncommunicable (PEN) Disease Interventions for Primary Health Care in Low-Resource Settings." World Health Organization. Geneva: World Health Organization, 2010. https://apps.who.int/iris/bitstream/handle/10665/44260/9789241598996_eng.pdf;jsessionid=365F6D0D77777E31DFDAAA391F0F351D?sequence=1.

Papachristos, Andrew V., David M. Hureau, and Anthony A. Braga. "The Corner and the Crew: The Influence of Geography and Social Networks on Gang Violence." *American Sociological Review* 78, no. 3 (June 2013): 417–447. https://doi.org/10.1177/0003122413486800.

Papalia, Nina, Benjamin Spivak, Michael Daffern, and James R.P. Ogloff. "A Meta-Analytic Review of the Efficacy of Psychological Treatments for Violent Offenders in Correctional and Forensic Mental Health Settings." *Clinical Psychology: Science and Practice* 26, no. 2 (April 22, 2019): 1–28. https://doi.org/https://doi.org/10.1111/cpsp.12282.

"Police Excessive Force." American Civil Liberties Union. Accessed March 2020. https://www.aclu.org/issues/criminal-law-reform/reforming-police/police-excessive-force?redirect=issues/criminal-law-reform/reforming-police-practices/police-excessive-force.

"Policing 101: Community Relations Services Toolkit for Policing." U.S. Department of Justice. 2015. https://www.justice.gov/crs/file/836401/download.

Potter, Gary. "The History of Policing in the United States." Eastern Kentucky University School of Justice Studies, 2001. https://plsonline.eku.edu/sites/plsonline.eku.edu/files/the-history-of-policing-in-us.pdf.

"Prison Time Served and Recidivism." Pew Charitable Trusts, October 2013. https://www.pewtrusts.org/en/research-and-analysis/fact-sheets/2013/10/08/prison-time-served-and-recidivism.

Provine, RR. "Contagious Behavior: An Alternative Approach to Mirror-like Phenomena." *Behavioral and Brain Sciences* 37, no. 2 (April 2014): 216. https://doi.org/10.1017/S0140525X13002458.

Rosenthal, Brian M. "Density Is New York City's Big 'Enemy' in the Coronavirus Fight." *The New York Times*, March 23, 2020. https://www.nytimes.com/2020/03/23/nyregion/coronavirus-nyc-crowds-density.html.

Sawyer, Wendy, and Peter Wagner. "Mass Incarceration: The Whole Pie 2020." Prison Policy Initiative, March 24, 2020. https://www.prisonpolicy.org/reports/pie2020.html.

Scully, Jackie Leach. "What Is a Disease?" *EMBO Reports* 5, no. 7 (July 2004): 650–53. https://doi.org/10.1038/sj.embor.7400195.

Skogan, Wesley G., Susan M. Hartnett, Natalie Bump, Jill Dubois, Ryan Hollon, Danielle Morris, Richard Block, Catrina Roman, Natalie Bump, So-young Kim, Andrew Clark, Jonathan Webber, Stacy Pancratz, Tao Xie, Susan M. Hartnett, Andrew Papachristos, Jennifer Yahner. "Evaluation of CeaseFire-Chicago." National Institute of Justice and Northwestern University. rev. March 2009. https://1vp6u534z5kr2qmr0w11t7ub-wpengine.netdna-ssl.com/wp-content/uploads/2019/09/Skogan-2009-Eval.pdf.

Slutkin, Gary. "Violence Is a Contagious Disease." In *Contagion of Violence: Workshop Summary*. Washington, DC: The National Academies Press, 2013.

Smith, Kirsten P., and Nicholas A. Christakis. "Social Networks and Health." *Annual Review of Sociology* 34 (2008): 405-29. Accessed November 9, 2019. www.jstor.org/stable/29737797.

Specktor, Brandon. "Coronavirus: What is 'flattening the curve,' and will it work?" *Live Science.* March 16, 2020. https://www.livescience.com/coronavirus-flatten-the-curve.html.

"Stats of the States - Homicide Mortality." Centers for Disease Control and Prevention. Centers for Disease Control and Prevention, February 20, 2020. https://www.cdc.gov/nchs/pressroom/sosmap/homicide_mortality/homicide.htm.

"Suicide Rates per (100 000 Population)." World Health Organization. World Health Organization, December 27, 2018. https://www.who.int/gho/mental_health/suicide_rates_crude/en/.

Suzuki, Shinsuke, Emily L.S. Jensen, Peter Bossaerts, and John P. O'Doherty. "Behavioral Contagion during Learning about Another Agent's Risk-Preferences Acts on the Neural Representation of Decision-Risk." *Proceedings of the National Academy of Sciences of the United States of America* 113, no. 14 (April 5, 2016): 3755–60. https://doi.org/10.1073/pnas.1600092113.

Thompson, Christie, and Elizabeth Eldridge. "Treatment Denied: The Mental Health Crisis in Federal Prisons." *The Marshall Project*, November 21, 2018. https://www.themarshallproject.org/2018/11/21/treatment-denied-the-mental-health-crisis-in-federal-prisons.

Tomlinson, Kelli D. "An Examination of Deterrence Theory: Where Do We Stand?" *US Courts Federal Probation* 80, no. 3 (December 2016): 33–38. https://www.uscourts.gov/sites/default/files/80_3_4_0.pdf.

Wagner, Peter, and Bernadette Rabuy. "Following the Money of Mass Incarceration." Prison Policy Initiative, January 25, 2017. https://www.prisonpolicy.org/reports/money.html.

Wang, Shirley. "Contagious Behavior." Association for Psychological Science - APS, February 2006. https://www.psychologicalscience.org/observer/contagious-behavior.

Weisburd, David, Rosann Greenspan, Edwin E. Hamilton, Hubert Williams, and Kellie A. Bryant. "Police Attitudes Toward Abuse of Authority: Findings From a National Study." *National Institute of Justice: Research in Brief*, May 2000. https://www.ncjrs.gov/pdffiles1/nij/181312.pdf.

Whalen, Andrew, and Kevin Laland. "Conformity Biased Transmission in Social Networks." *Journal of Theoretical Biology* 380, no. 7 (September 7, 2015): 542–49. https://doi.org/10.1016/j.jtbi.2015.06.028.

"What We Do." Cure Violence. Cure Violence Global, 2019. https://cvg.org/what-we-do/.

"Where We Work." Cure Violence. Cure Violence Global, 2019. https://cvg.org/where-we-work/.

WHO (1946) Preamble to the Constitution of the World Health Organization. WHO, New York, USA.

Zimring, Franklin E. *When Police Kill*. Cambridge, MA: Harvard University Press, 2017.

"10 Facts on Noncommunicable Diseases." World Health Organization. World Health Organization, March 29, 2014. https://www.who.int/features/factfiles/noncommunicable_diseases/en/.

"2018 Police Shootings Database." *The Washington Post*, 2018.

"2019 Police Shootings Database." *The Washington Post*, 2019.