THE STATE OF MURDER IN JAPAN AND THE UNITED STATES

A STORY OF SOCIOECONOMIC INTEGRATION AND POLICE GEOGRAPHY

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Japan has uncovered a competitive advantage in murder prevention strategies, as murder rates in the nation are some of the lowest in the world. In Japan, murder rates have been falling consistently since the post-World War II era to reach rates of 0.2 murders per 100,000 people, whereas in the United States these rates have been historically volatile, stabilizing in recent decades slightly above 5 murders per 100,000 people. This study poses the following questions: What structural, sociolegal, and policy elements have made Japan reach such positive results in murder prevention? And what lessons can be learned from this success that may help reduce murder rates in the United States? Analyzing the state of murder in Japan and the United States, this Paper provides a comparative examination of some of the structural factors affecting the geographical and perpetrator elements of murder. Through the lens of (i) socioeconomic indicators like inequality, poverty, and unemployment, as well as (ii) the geographical allocation of police resources (comparing the United States police infrastructural arrangement with the Japanese koban system), this Paper attempts to shine light on the structural patterns that have made Japanese society such a profoundly safe environment from homicide. Avoiding purely holistic or monolithic culturalist arguments, the Paper looks at the historical trajectory of murder at a national level,

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then provides a contemporary state of murder analysis of Boston as compared to Osaka, and New York in contrast to Tokyo. Dispelling the notion that a larger police force with larger capital investment equates safety from murder, the study finds that (i) areal socioeconomic integration, and (ii) equal geographic distribution of police resources as community-focused and integrated safety providers, are two of the foundational distinct elements that lead to murder prevention in Japan—and that a tailored adaptation of this system to the United States’ needs, capabilities, and characteristics could signify increased efficiency in murder prevention, and a consequent reduction in murder rates.
# Table of Contents

1. Introduction ....................................................................... 812  
2. A Brief History of Murder in Japan and the United States ................................................................................... 813  
3. City Comparisons: Geographical Relationship Between Murder, Socioeconomic Factors, and the Police........ 826  
   3.1. The High-Crime Micro-Unit Thesis and its Shortcomings .................................................................................... 826  
   3.2. Boston and Osaka ........................................................ 832  
   3.3. New York and Tokyo ................................................... 844  
4. Conclusions, Police Analysis, and Recommendations 860
1. INTRODUCTION

Japan’s murder rates have been consistently falling since World War II, to the point that the Land of the Rising Sun is one of the safest countries in the world, with some of the lowest murder rates. This raises a number of compelling legal and policy questions: Why are there so few murders in Japan? What are the legal and policy structures that have contributed to a constant decline in murder rates throughout the nation’s recent history? How can we better understand the elements that define its model so that we can imitate its success? In endeavoring to answer these questions and those that may derive from them, this Paper conducts a comparative analysis between murder rates in the United States and Japan, first addressing national tendencies, and then changing the focus of the study to specific cities. Observing the comparatively low number of murders in Japan with the rest of the world in general, and the United States in particular, this Paper intends to reveal potential patterns behind the Nippon nation’s continued success in murder prevention, and in understanding the underlying socioeconomic and legal factors that lead to it, formulate functional policy recommendations for the United States. The thesis scrutinizes the relationship between murder as a legal and policy issue and (i) socioeconomic factors, with a specific concentration on inequality indexes, unemployment, and poverty, and (ii) police presence and the geographical allocation of its resources. The focused analysis is geography-based and it adjusts its lens first at a national scope, pursuing a historical socioeconomic analysis of the state of murder.

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1 INST. FOR ECON. & PEACE, GLOBAL PEACE INDEX: MEASURING PEACE IN A COMPLEX WORLD (2019), http://visionofhumanity.org/app/uploads/2019/07/GPI-2019web.pdf [https://perma.cc/7EQ8-BKUE]; see also Japan, OECD BETTER LIFE INDEX, http://www.oecdbetterlifeindex.org/countries/japan/ [https://perma.cc/W8VP-RH41] (last visited June. 15, 2020) (“The homicide rate (the number of murders per 100,000 inhabitants) is a more reliable measure of a country’s safety level because, unlike other crimes, murders are usually always reported to the police. According to the latest OECD data, Japan’s homicide rate is 0.2, the lowest rate in the OECD, where the average homicide rate is 3.7.”). The data analysis and policy formulations presented throughout this Paper were gathered and generated prior to the 2020 Covid-19 pandemic. For example, though unemployment may have increased in the United States as a direct result to Covid-19 and its consequent regulatory reactions, lockdown and other shelter-in-place policies may interact differently with murder rates than prior freedom of movement policies would. All in all, this Paper does not intend to make claims with respect to the influence of the Covid-19 pandemic on murder rates, and how other indicators may respond to or network with socioeconomic elements.
commencing in the post-war era; and then pursuing a narrower examination at a city-level, offering contemporary comparative reviews of the state of murder in Boston and Osaka as well as New York and Tokyo.

The Paper is configured as a critique of Braga, Papachristos, and Hureau’s high-crime micro-units thesis of crime (or crime “hot spots”). This theory presents two inferences derived from observations gathered from the city of Boston’s crime data: (i) most homicides occur within specific highly concentrated areas (micro-units), and (ii) most murders are and will be executed by a highly limited group of people with high rates of recidivism. The hot spots thesis is founded upon the premise of predictive analytics. Through observing the past geolocation of murders, it attempts to predict and map the future of nonnegligent killings. By utilizing predictive geospatial modeling, the hot spot theory hopes to allocate police and other resources more efficiently, distributing them according to the anticipated crime locations. This Paper intends to analyze, first, whether the micro-unit model has value beyond being a description of Boston’s murder landscape, and second, whether it can be applicable cross-culturally. It does so by comparing murders in the city of Boston with those of Osaka, and for contrastive control, New York with Tokyo. Further, building upon the findings of the comparative analysis, this Paper will offer policy recommendations for the prevention of murder in the United States.

2. A BRIEF HISTORY OF MURDER IN JAPAN AND THE UNITED STATES

A Tale of Murder and the Economy – By the Numbers

The histories of murder in the United States and Japan are profoundly different. Though nominally similar in their point of origin, as both nations shared comparable murder rates during the beginning of the twentieth century, at some point the path of these


3 See discussion infra Section 3.1 (establishing murders as a consequence to gun violence, and gun violence being a remarkably concentrated phenomenon per Braga et al.’s data-centered conclusions).
nations diverged to the vastly different states of murder seen today. While Japanese murder rates have fallen steadily throughout recent history since World War II, murder rates in the United States have been near-perpetually volatile—though subject to a tendential decline within the most recent decades. What are the socioeconomic, legal, or policy indicators behind Japan’s steady decline and U.S. volatility? Are there any discernible patterns that may inform or affect murder in these two countries beyond nebulous culturalist explanations? To attempt to answer these questions and understand the suitability of the high-crime micro-unit thesis in both nations, it is necessary to lay a historical foundation that may create a cohesive and data-driven narrative for the evolution and present state of murder rates in both countries since the post-war era. A preliminary methodological step is to evaluate and communalize an operational definition regarding how Japan and the United States legally categorize murder within their respective legal structures.

The United States defines murder as the unlawful killing of a human being with malice. It is the qualifying element of intentionality that distinguishes murder from other forms of killing (like manslaughter), and the absence of a justification (like self-defense), that renders the act unlawful. Japan, very closely ascribing to these legal parameters, defines murder as homicide with intent. However, in statistically codifying murder data, Japanese police include counts of attempted murders (which amount to about half of Japan’s archived aggregate murder count), and do not include murders connected to robberies, or assaults that, unintentionally, conclude with death (“robbery murders” and “lethal assaults,” respectively). Such robbery murders and lethal

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5 See Murder, FBI: UCR, supra note 4 (defining justifiable homicides).
assaults generally account for 10-15% of all killings. With a definitional common ground demarcated, the Paper will proceed to a country-focused analysis of murder rates, and their interrelationship with socioeconomic elements, commencing with an examination of the contemporary history of murder in the United States.

In 2017, in the United States, there were a total of 17,284 murders—a rate of 5.3 murders per 100,000 people. In contemporary history, U.S. murder rate trends have stabilized between 4 and 6 cases per 100,000. However, this is just the story of the two most recent decades (2000s and 2010s). The broader historical trajectory of murder rates in the United States tells a different tale—one of almost constant fluctuation. For the first half of the twentieth century, murder rates escalated from averages below 3 murders per 100,000 individuals during the century’s first decade, to 5 murders per 100,000 throughout the 1920s, to peaks of over 10 murders per 100,000 during the late 1920s and early 1930s (coinciding with the Great Depression). Eventually, murder rates dropped sharply during the pre-war era, to stabilize at averages of under 6 murders per 100,000 individuals in the years immediately following World War II.

Casting a more focused inquiry into post-war United States, during the 1950s, murder rates rested at values of 4, and during the early 1960s closer to 5 per 100,000 people once

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8 See State and National Crimes Estimates by Year, supra note 7.

again. Yet, in the late 1960s, murder rates grew significantly and continued to ascend throughout the early 1970s and 1980s. During these two decades, the United States’ murder rates oscillated at their peak around 10 murder cases per 100,000 individuals, with the two decades finding an equilibrium just below rates of 9. The 1990s brought a downwards trend in murder rates, a reduction that would see the ratios contract from over 9 at the beginning of the decade, to below 6 murders per 100,000 individuals at its conclusion. This undeviating decline would be continuous until a stabilization period throughout the 2000s with rates that stayed in the mid-5 range—averaging 5.52 murders per 100,000 individuals for the decade. Currently, the United States seems to be in a period of relative stability with a slight uncertainty in its directionality. The murder rate in 2018 of 5.0 murders per 100,000 individuals was down from the rates in 2017 (5.3) and 2016 (5.4), but up from those in 2015 (4.9) and 2014 (4.4). 2014 was the year with the least documented murders in the United States since the FBI database started recording this data in 1960, marking the bottom of a trough which had started in 1991, when murder rates ascended to 9.8, and then fell almost steadily since—save for the aforementioned stabilization during the 2000s which included slight transitional increases. In fact, the 2010s have been America’s safest decade according to murder cases in FBI-recorded history. The 2010s had an average rate of 4.85 murders per 100,000 individuals, a stark

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11 See State and National Crimes Estimates by Year, supra note 7.  
12 Id.  
13 Id; Intentional Homicides, supra note 7.  
14 See State and National Crimes Estimates by Year, supra note 7; Intentional Homicides, supra note 7. According to the FBI database, the standard deviation for the 2000s murder rates was the lowest in history. The 1990s saw the most abrupt yearly divergence rates. For more information on general standard deviation/volatility, see discussion infra note 18.  
contrast with the 1970s, which suffered the highest rates at 8.97 (with a peak average between 1978 and 1982 of 9.58), and below America’s comprehensive historic average, which is presently anchored at 6.95 murders per 100,000. In essence, the United States’ state of murder is one characterized by general volatility, a tendential relative decline throughout the most recent decades, and a slight uptick in the most recent years.

Economically, the trends are quite disparate amongst the different selected indicators of inequality, unemployment, and poverty. Inequality follows its own path, while trends in unemployment and poverty coincide and travel parallel to those of murder rates. As to the first indicator, inequality indexes in the United States have followed an almost entirely linear upwards trajectory throughout recent history, tabulating at a 0.415 Gini (a standard measure of wealth distribution, where 1 is absolute inequality and 0 is absolute equality) in 2016. Inequality during the 1970s was significantly lower than it is presently, sitting in the mid 0.3 ratio during the entire decade. The two most significant observable increases in inequality in the United States have occurred (i) during the beginning of the 1980s, jumping from 0.346 Gini in 1979 to 0.375 in 1986 (an 8.38% increase in 7 years); and (ii) during the early 1990s, growing from 0.382 in 1991 to 0.402 in 1994 (a 5.2% increase in 3 years). Because of the linear and progressive increase in inequality, it is difficult to find a connection at a macroeconomic national level between inequality (which has grown consistently) and murder rates (which have been subject to abrupt variations, seemingly disconnected from the constant increase in economic inequality).

17 See State and National Crimes Estimates by Year, supra note 7.
18 The standard deviation of U.S. murder rates between 1960 and 2018 is approximately 6.12% (an average of arithmetic standard deviation of 0.061195882, and logarithmic standard deviation of 0.060624622), rendering the annualized historical volatility in this 58-year-period 46.62%. All calculations have been made utilizing FBI’s U.C.R. data.
20 Id.
21 Id.
Unemployment indicators, on the other hand, seem to share direct correlative mirroring with murder rates. In 2019, unemployment reached a historic low of approximately 4% in the United States, following a continuous descent since the 2008 economic crisis, after rates of 5% in 2016, 8% in 2012, and 10% in 2009. Unemployment rates in the United States—like murder rates—increased sharply during the 1970s, reaching a peak of 9% labor inactivity in 1975 before decreasing slightly, accompanied accordingly throughout by equally oscillating murder rates. This modest decline in both unemployment and murder rates during the late 1970s would then revert, cresting above 10% unemployment during 1983 and 1984, accompanied again by historic highs in murder rates—above 10 murders per 100,000 individuals. After the early 1980s increase which would present summits in both unemployment and murder rates, there would be another slight reduction, with a low of 5.3% unemployment in 1989, which would last until another increase during the early 1990s—again mirroring murder rates. Minor fluctuations ensued after this point, but a relative balance was found between 4 and 6% unemployment rates.

22 A geographically-focused state-by-state linear regression analysis regarding murder-counts in 2018 reveals the correlation coefficient between state unemployment rates and homicides is $r=0.47749$, $p=0.0005$; and an areal linear regression analysis between state poverty and homicide $r=0.69928$, $p=0.000000016$. 


24 See Databases, Tables & Calculators by Subject: Unemployment Rate (Data from 1960 to 2019), supra note 23.

25 See Id.; State and National Crimes Estimates by Year, supra note 7.

26 See Databases, Tables & Calculators by Subject: Unemployment Rate (Data from 1960 to 2019), supra note 23; State and National Crimes Estimates by Year, supra note 7.
(accompanied by murder rate stabilization), followed by another surge in 2008, which would leave the country with above 9% labor-inactive population. After the 2008 economic crisis, the country entered an era of labor recuperation, and unemployment rates have steadily decreased to the rates seen today. There is currently around 4% total unemployment in the United States. It is directly observable that these unemployment fluctuations seem to go almost hand in hand with murder rates. This correlation is such that it has attracted the attention of academia, establishing unemployment rates as a strong predictive tool for murder rates in the United States. This Paper, however, intends to steer clear of monolithically holistic answers to the questions posed by murder rates and, though noting the significant and valid relationship between unemployment and murder, seeks further comprehension of the data in pursuit of policy recommendations that exceed that of merely reducing unemployment.

Having briefly examined inequality and unemployment’s relationship with murder rates in the United States generally, this
Paper will proceed to examine another of the selected socioeconomic indicators: the potential connection between poverty and murder rates at a national level. Relative poverty rates in the United States have remained relatively stable throughout the analyzed eras, with fluctuations between 11 and 15% (and usually resting between 12 and 14%). In 2018, poverty rates stood at 12.3%. Just as unemployment accompanies the oscillations in murder rates, a macroeconomically-focused approach to poverty follows a similar trajectory with contiguous peaks and valleys. Poverty rates were at their minimum and most invariable during the 1970s, with the lowest percentage taking place in 1973 at 11.1%. These rates remained stable until the late stages of the 1970s, steadily increasing and peaking in 1983 at 15.2%, just as murder rates (and unemployment) peaked as well. Poverty rates then decreased consistently to reach a rate of 12.7% in 1989, and escalated again to 15.1% in 1994, coinciding once more with an escalation in the number of murders in the nation. After this peak, the decrease remained steady through the 2000s with said stability being reflected in murder rates as well, until the 2008 economic crisis, which would present significant financial and socioeconomic backlash coinciding with an ascent to a 15.1% poverty rate in 2010. It is apparent in this regard that, macroeconomically and at a national level, poverty and unemployment in the United States mirror each other, and they both correlate strongly with murder, whereas inequality has maintained an independent and continuous ascent—rendering it a non-factor at a macro-geographical national level.

Japan presents a structurally distinct state of murder from that of the United States—both in terms of quantity of murder and historical variance. In Japan, murder rates are, overall, significantly lower than those of the United States. In 2016, when the United


32 Fontenot et al., supra note 31.
33 Id.
34 Id.
35 Id.
States faced 17,413 murders with a rate of 5.4 per 100,000 people,\textsuperscript{36} Japan only had 362 murders in total, for a rate of 0.28 murders per 100,000 individuals.\textsuperscript{37} These rates are not uncommon in Japan, a country in which the number of murders has a history of yearly decrease since the post-war era. While the United States has stabilized within the last decade at averages near 5 murders per 100,000 individuals, Japan has diminished from averages of 0.6 during the 1990s, to 0.5 during the 2000s, to less than 0.4 on a consistent (and diminishing) basis—culminating in a 0.2 murder rate in 2017.\textsuperscript{38} Japan also exhibits a much more stable overall trend than the United States—U.S. murder rates fluctuate and shadow unemployment and poverty rates, while Japan follows a stable downward trajectory without severe alterations upwards and disconnected from socioeconomic influxes.

Historically, prior to World War II and throughout most of the first quarter of the twentieth century, Japan’s murder rates varied between averages of 3 and 4.5 murders per 100,000 individuals; standards that would drop dramatically during the mid-1930s to reach a valley of rates slightly over 1 murder per 100,000 individuals, stabilizing again above 3.5 in the decade immediately following the war.\textsuperscript{39} However, since the post-war period, and with particular intensity since the mid-1950s, the homicide rate has decreased at a steady and constant pace. From the 1960s to the 1980s, the murder rate undeviatingly fell from 2 per 100,000 to 1.\textsuperscript{40}

\textsuperscript{36} See Crime in the United States, FBI, supra note 15.
\textsuperscript{37} See Intentional Homicides, supra note 7.
\textsuperscript{38} Id.
\textsuperscript{40} See Intentional Homicides, supra note 7.
Since then, rates have only continued to decrease stably throughout the decades. In essence, Japan’s murder rates enjoy a continuous decline since the post-World War II era—a fall that is disconnected from socioeconomic deviations and influences.

Economically, as mentioned above, Japanese murder rates do not seem to have a conditional relationship with fluctuations in inequality, unemployment, or poverty, thus presenting a structural difference with the United States, where the data appears to suggest strong connections between socioeconomic indicators and murder rates. Inequality in Japan is comparatively less significant than that of the United States, and, unlike in the United States, it does not trend exclusively upwards.

Between 1985 and 2000, Gini indexes reflected an increase from 0.304 to 0.337. However, by 2003 inequality measurements decreased to 0.321. Between 2003 and 2009, there was another increase, which would leave the index standing at 0.336. This uptick was followed by another decrease in 2012, seeing numbers return to 0.33. Between 2009 and 2013, while the United States exhibited an estimated Gini coefficient of 0.453, Japan sustained an average of 0.329. Hence, while the United

41 The only exceptions have been (i) a slight increase from 0.45 in 2007 to 0.51 in 2008 (from 574 to 654 total murders, coinciding with the economic recession) to continue the downward trend in following years (506 total murders in 2009, 465 in 2010, 442 in 2011, 429 in 2012); (ii) from 370 in 2013 to 395 in 2014, to continue the downward trend in following years (363 in 2015, 362 in 2016); and (iii) from 306 total murders in 2017 to 334 in 2018. See Victims of intentional homicide, 1990-2018, UNITED NATIONS OFF. ON DRUGS & CRIME https://data.unodc.un.org/content/data/homicide/homicide-rate [https://perma.cc/5ZEB-JJ6E].


43 See Income Inequality, ORG. FOR ECON. CO-OPERATION & DEV., supra note 42; THE ATLAS OF HEALTH INEQUALITIES IN JAPAN, supra note 42.

44 See Income Inequality, ORG. FOR ECON. CO-OPERATION & DEV., supra note 42; THE ATLAS OF HEALTH INEQUALITIES IN JAPAN, supra note 42.

45 Income Inequality, ORG. FOR ECON. CO-OPERATION & DEV.; THE ATLAS OF HEALTH INEQUALITIES IN JAPAN, supra note 42; see generally Mitsumaru Kumagai et al., Japan’s Economy: Monthly Review, DAIWA: INST. RES. (Oct. 21, 2016).

States’ wealth disparity continues to soar, unequal distribution of wealth in Japan is not only (i) comparatively smaller, but (ii) exhibits elements of cyclicality, and (iii) appears disconnected from progressively diminishing murder rates.

Unemployment in Japan has also remained relatively stable, oscillating between rates of 1 and 3%.

In 2019, the unemployment rate rested at 2.5%, consistent with professional inactivity historical rates. The exception to this stability occurred during the 1990s, a time that historians and experts on Japan have referred to as “the lost decade,” an economic period in which the Japanese economy stagnated, halting its previous meteoric growth.

Before that, throughout the 1950s and the 1960s, unemployment percentages in post-war Japan stood between 1 and 2%. During the 1970s, unemployment stabilized with figures between 2 and 3%, and though unemployment rose, murder rates kept their steady decline. As previously mentioned, the rupture to Japan’s continuous economic prosperity arrived during the 1990s—an era in which unemployment would increase, but murders would continue their inexorable decline. The lost decade would bring with it a steady increase in unemployment, peaking in the early 2000s above 5%. After this cycle, there was a slight period of recuperation, and the rates fell again to around 3.5%. However, this recuperation
was a transitory mirage that did not account for the 2008 economic recession, which sent unemployment rates back above 5%. Nevertheless, this peak was short-lived, and unemployment rates since have kept plummeting, reaching slightly above 2% in recent years. Throughout these fluctuations in unemployment at a national level, murder rates have continued to descend. In this regard, Japan differs from the United States in that unemployment rates are more stable (even in periods of recession) and are not mirrored by murder rates.

Poverty rates in Japan are below those in the United States, but not considerably so. The Organisation for Economic Co-operation and Development ("O.E.C.D.") categorized the United States as having a poverty rating of 0.178, while Japan’s was 0.157. Poverty rates in Japan, contrary to murder rates, have followed a steady increase in recent history. While in the mid-1980s relative poverty rates were stable at around 12%. In the 1990s, the lost decade would usher in an increase to 15%. Continued economic stasis, in addition to a gradual resurgence from the 2008 economic crisis, drove Japan to a poverty rate of 16.1% in 2012. Though the Nippon

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54 Id.
55 Id.
56 See MINISTRY OF HEALTH, LABOR AND WELFARE, 各種世帯の所得等の状況 [INCOME DISTRIBUTION], https://www.mhlw.go.jp/toukei/saikin/hw/k-tyosa/k-tyosa16/dl/03.pdf [https://perma.cc/4PW3-4KDV].
58 In 2011, demands for social welfare services (Seikatsu-hogo) reached a peak of two million people. For more information on welfare distribution rates, see UNIVERSITY OF BRISTOL (Townsend Centre for International Poverty Research) & NATIONAL INSTITUTE OF POPULATION & SOCIAL SECURITY RESEARCH (Kokuritsu Shakai Hoshō Jinkō Mondai Kenkyūjo, IPSS), Research Seminar: The State of the Art of Measuring Poverty and Social Exclusion in the UK and Japan, https://www.bristol.ac.uk/poverty/ESRCJSPS/uk/1/iwata.html [https://perma.cc/3LSG-XMTD] [hereinafter Poverty Research Seminar]. Poverty rates seem to concentrate in the elderly, the single, and in particular, the single mothers. See Japan’s Worsening Poverty Rate, NIPPON.COM (Sept. 24, 2014), https://www.nippon.com/en/features/h00072/japan%e2%80%99s-worsening-poverty-rate.html#note-1-1 [https://perma.cc/6CY4-BDSP] (discussing the increase in relative poverty in Japan while absolute poverty is decreasing); Masami Iwata, UK-Japan Measurement of Poverty Seminar: Poverty and Social Exclusion in Japan: An Overview from the 1990s and Recent Policy Responses (Jan. 6, 2012) (unpublished paper) (analyzing the role of social assistance in measuring poverty).
59 See Japan’s Worsening Poverty Rate, supra note 58.
nation has partially recuperated since then, achieving a 15.6% rate of poverty in 2015, the disparity with the United States in this particular measurement remains relatively limited. In fact, in 2017, the difference between the countries was only 1% (with relative poverty rates of 16.3 in Japan, and 17.3% in the United States). Nonetheless, and despite the limited divergence between the nations, what can be asserted is that Japan’s murder rate has not historically increased with increasing poverty rates. Murder rates keep declining, disconnected from the rise in poverty, unlike in the United States where murder rates and poverty indicators show associative signs.

At first glance, the United States has more murders per capita than Japan by a significant margin. Historically, U.S. rates have oscillated between 4 and 7 murders per 100,000 individuals, with an average rate between 1960 and 2018 of 6.95. The American history of murder is characterized by significant fluctuations and directional variance. Japanese murder rates, which existed at rates of approximately 3.5 murders per 100,000 individuals in the late 1940s and early 1950s, have been on a continuous and inexorable decline since. Whereas contemporary U.S. murder rate trends oscillate between 5 and 6 murders per 100,000 individuals, with an average rate for the last two decades (2000s and 2010s) of 5.19; murder rates in Japan have stabilized below 0.3 in recent decades. But beyond this axiomatic conclusion, there is a more nuanced inference underlying this trend, and it is tied to rate volatility and socioeconomic responsiveness. The United States’ murder rates seem responsive to socioeconomic tendencies and trajectories: murder rates mirror the ups and downs of different economic indexes. In particular, there is an observable relationship between murder rates and unemployment as well as accompanying poverty

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rates, though murder does not seem to correlate with inequality, which maintains a steady ascension throughout contemporary American economic history. In Japan, murders keep declining in number, despite fluctuations in socioeconomic indicators. Murder rates are in a constant and continuous downward trajectory, remaining unresponsive to external influxes and variations in the economy. It is worth mentioning that, during Japan’s lost decade—a period characterized by economic stasis—murder rates did not increase. While murder rates in the United States appear volatile and susceptible to their socioeconomic context, recent Japanese history shows a continuously declining progression, autonomous and independent from the selected indicators of inequality, unemployment, and poverty. After World War II, Japan had an inflection point in its murder rate, and has experienced a continuous downward trend ever since, while U.S. murder rates adjust to the waves of socioeconomic inference.

3. CITY COMPARISONS: GEOGRAPHICAL RELATIONSHIP BETWEEN MURDER, SOCIOECONOMIC FACTORS, AND THE POLICE

3.1. The High-Crime Micro-Unit Thesis and its Shortcomings

Assessing risk of murder by street intersection

The importance of geography in relation to murder has been studied and examined by legal, criminal, and social academics in multiple ways. The two principal manners in which geography’s significance has been utilized as an instrument to inform policy recommendations regarding murder reduction are: (i) utilizing geography as an explanatory element for crime, building upon the assumption that geo-environmental and systemic social networks affect criminal choices, and (ii) as a predictive tool, deploying

These explanatory theories tend to connect underprivileged communities with higher rates of crime. See generally BETSY GOTBAUM, OFFICE OF THE N.Y.C. PUB. ADVOCATE, OLD PROBLEM, NEW EYES: YOUTH INSIGHTS ON GANGS IN NEW YORK CITY (2008); STEVEN F. MESSNER & RICHARD ROSENFELD, CRIME AND THE AMERICAN DREAM (5th ed. 2013) (describing the sociocultural origins of crime); EAMONN CARRABINE, CRIME AND SOCIAL THEORY (2017) (applying sociological theory to the study of criminology); KEVIN M. BEAVER, THE NATURE AND Nurture OF ANTISOCIAL
location of crime as an element that can serve to anticipate and predict future crime.

Explanatory models understand geographic communities as sociocultural sources of crime, and by providing analytical foundations as to the nature of the root of crime, attempt to understand, and comprehensively address its causes and structural components. Predictive models separate themselves from the qualitative essence that permeates explanatory theses, somewhat discarding the interpretive premises that underlie criminal activity. Instead, they choose to comprehend the geo-spatial order and method to crime. By identifying the systemic patterns embedded within the location of past crimes, these models attempt to discern potential future locations of criminal activity. Most models draw from elements on both sides of this dichotomy, as these theoretical pillars are not exclusive nor entirely independent. Both analytic propositions acknowledge that geography is a crucial component in determining crime in general and murder in particular, though they approach crime prevention and resolution differently.

Predictive models, like the one evaluated and applied in this Paper, are not novel in concept, and they generally build on decades of data observation. In the 1950s and 1960s, legal researchers and

criminologists were already identifying and recognizing similar geographical tendencies. Observing, for example, that in Houston 70% of murders took place in 18% of the census tracts in the city,63 and that in Cleveland data showed that two thirds of the crimes took place in 12% of the geographical space of the city.64 Modern technology and advanced data-gathering techniques have paved this old path, and given way to highly sophisticated methods of crime mapping.65 By sequencing and geo-referencing crime records, these models of crime codification generate operational risk-intensity values 66 that aid in the visualization of patterns of criminality risk by geographical area.67 One of the foundational assumptions to the success of these models is that they perceive past crime as a extrapolative communication of future crime, and task the past to optimally predict forthcoming criminal activity.68

The theory that this Paper addresses falls within the predictive category, and intends to advance its principles to new levels of geopositional certainty through advancing the predictive data inferred from (i) geolocation of crime, and (ii) those who perpetrate it. Braga, Papachristos, and Hureau’s high-crime micro-unit thesis (or hot spot theory)69 attempts to, through location-data gathering and regressive inferences, detect and identify crime patterns, and, determining where murders (and shootings) occurred in the past, conclude where they are most likely to happen in the future.70 Their findings, however, take the theory one step further to conclude that “city-level gun violence trends may best be understood by the analyses of trends at a very small number of micro places, such as street segments and intersections, rather than analyses of trends at larger areal units such as neighborhoods, arbitrarily-defined policing districts, or census tracts.”71

64 Bensing & Schroeder, supra note 63.
66 Id. at 147.
67 Id. at 152.
68 Id. at 146.
69 See generally Braga et al., supra note 2; see also Johnson et al., supra note 65, at 148.
70 See generally Braga et al., supra note 2.
71 Id. at 48.
Furthermore, Braga et al. reject the idea that defining the “at-risk” population as “young, minority males living in disadvantaged neighborhoods” is sufficient.\(^\text{72}\) Their thesis deems this categorization of murder-perpetrators as insufficiently refined and suggests it does not capture the actual levels of concentration of city-based gun violence.\(^\text{73}\) In fact, they propose that murder cases, consequent to gun violence, are much more concentrated than previous proposals may submit.\(^\text{74}\) Their findings can be better explained in a two-part conclusion, which will be comparatively analyzed throughout the next section. Generally, the hot spots theory addresses and predicts (i) the individuals that commit murder, and (ii) the locations in which murder occurs. Pertaining to the first analytical element, that of perpetrators, in 2006 “about 1% of Boston’s youth ages 15-24 participated in gangs and these gangs accounted for 50% of total homicides, 77% of youth homicides, and 70% of fatal and non-fatal shootings in Boston.”\(^\text{75}\) Regarding the second analytical element, that of geographical allocation of criminal incidents, 89% of street segments in Boston never withstood any reported firearm related incident, around 6% had a single firearm incident, and the remaining shootings occurred in 5% of the street segments.\(^\text{76}\) The analytical conclusion that can be drawn from their theory is that murder is “largely concentrated at a small number of gun violence hot spots.”\(^\text{77}\) In order to remedy hot spot violence, Braga et al. propose a model in which prevention efforts (both in terms of police action and social work) are dedicated and focused in very specific locations and towards very specific people rather than diffused across neighborhoods.\(^\text{78}\)

This Paper observes these categorized qualities (perpetrators’ network\(^\text{79}\) and geographical location) as potentially predictive but

\(^{72}\) Id. at 48-51.  
\(^{73}\) Id.  
\(^{74}\) Id.  
\(^{75}\) Id.  
\(^{76}\) Id. at 48-49.  
\(^{77}\) Id. at 50.  
\(^{78}\) Id.  
\(^{79}\) Though the Paper does not address this issue directly or exhaustively, it is worth noting that it identifies that a comprehensively reductionist approach to the human component of Braga et al.’s proposition appears to determine commission of past crime as a sign of high likelihood of potential commission of future crime.
finds the hot spot theory insufficiently explanatory. The Paper attempts to uncover more granular qualities that may contribute to an explanation for the existence of hot spots, as well as expand its potential multi-city and cross-cultural contributions to the reduction of murder rates. The comparative analysis that will be conducted intends to assess the socio-legal value of the thesis at transnational, and therefore intercultural levels. In this regard, through the contrastive scrutiny of different cities, this Paper aims to assess the value of the hot spot model as either potentially applicable through a wide range of cities, or as merely descriptive of Boston’s gun violence problem. To this end, this Paper sets out to accomplish two main objectives. The first objective of the Paper is to establish whether the model is internationally and interculturally useful and applicable. The second objective of this Paper is to serve as a basis to achieve a better understanding of the model, adding potential avenues of implementation and development to it. This development intends to both substantiate more robust exegetic foundations for the concentration of geographically-allocated criminal activity in general, and murders in particular; and add to the serviceability of culturally expansive implementable policy recommendations. In other words, building on the knowledge and inferences provided by predictive modeling as well as on the comparative transnational and intercultural conclusions, this Paper intends to produce effective policy recommendations that may serve to reduce crime in the form of murder in the United States. The cities to be comparatively analyzed for these purposes are Boston and Osaka, as well as New York and Tokyo.

The foundational reasoning and policy proposals addressed and projected by this Paper attempt to avoid entirely culturalist approaches to sociolegal issues of conduct. Put differently, the Paper purposefully avoids exclusively cultural arguments and explanations ascribed solely to particular cultures or subcultures of violence, instead pursuing to endorse concrete, tangible, and specific recommendations. Though not intending to establish that

This could create a necessarily prejudicial and discriminatory conceptualization towards offenders, informing equally prejudicial and discriminatory policies, both (i) in an unfair, unjust, and pre-injurious manner, and (ii) becoming a source for decision-making bias, marking these individuals for a higher likelihood of secondary deviation, among other harmful social consequences.
culture has no explanatory value, purely historic and cultural critiques are difficult to translate into constructive policy goals with direct and observable results. Furthermore, at its inception, this Paper recognizes that the elements addressed in this analysis (economic factors and policing) are not the exclusive elements that may contribute to murder as a social issue but that they are relatively unexplored together, and have the potential to provide explanatory insights for murder rate variance, as well as to become resources for policy formulations deployed towards the reduction of said rates.

Boston is necessarily selected for this analysis because it is the city in which Bragas et al.’s foundational investigation was conducted. Osaka was chosen as a contrast city to Boston, due to its geographical and identity proximity to the economic center of the country (in Japan Tokyo, and in the United States New York), in addition to their resemblance as post-industrial second-tier metropolises. New York and Tokyo were chosen as comparative control cities, with the aspiration that, not only would they serve as governing elements to the corroborative efforts of the Paper, but that their contrast might enhance and increase the effectiveness of the analysis. The added value of this international, multi-city, and pluri-jurisdictional contrastive and evaluative exercise is central to the Paper. Observing the dramatically lower murder rates in Japan through a comparative sociolegal and policy lens, the Paper intends to identify key differences between the United States and Japan—within the categories of socioeconomic context and policing—to propose policy recommendations directed at reducing murder rates in the United States in emulating some of Japan’s successful approaches to the issue.

The literature tends to allude to Japan’s post-war resurgence and its cultural symbiosis with rejection of violence, or other purely cultural elements like the stigmatization of arrest, elevated social cohesion, and individual moral prevention patterns consequent to an acute social awareness of the limitations of one’s freedom as some of the possible explanations for the continuous decline in murders. This Paper will attempt to move beyond these types of esoteric statements to produce corporeal and implementable policy recommendations based on Japan’s discernable sociolegal design and structural policy success at reducing murder rates. GLOBAL STUDY ON HOMICIDE, supra note 39; W. K. PARK, TRENDS IN CRIME RATES IN POSTWAR JAPAN: A STRUCTURAL PERSPECTIVE (2006); Nobuo Komiya, A Cultural Study Of The Low Crime Rate In Japan, 39 BRITISH J. CRIMINOLOGY 369, 369-90 (1999).
3.2. Boston and Osaka

**Murder, the Economy, and the Police: Inequality and Concentration, Against Integration and Dispersion**

The objective of this section is to uncover potential patterns underlying the grouping, organization, and materialization of murder that may be encountered in Boston and Osaka; and either confirm or refute the applicable efficacy of the hot spot theory in multi-city and cross-cultural conditions. Then, conclusions will be drawn as to the similarities or differences between both cities to build upon Bragas et al.’s model for the purposes of policy recommendations. The structure of the analysis will first follow a contextualization of the cities within their respective nations and regions, proceeding with an examination of socioeconomic factors and their relationship to historic and geographic murder patterns, continuing with a comparative analysis of police force geographical presence, concluding with a valuation of the hot spots theory and its validity.

First, both cities should be contextualized in terms of where they stand as to murder rates within their nations, to better understand how representative they are as a sample, as well as reference the position they occupy within their respective regional conditions. Though the cities may be similar in general terms as to their country geopolitical significance as urban nuclei and regarding sociocultural positioning, as well as in murder rates relative to their country average, they occupy vastly different spaces in what pertains to their directly comparable intentional homicide averages. In the United States in 2016, the total national murder rate was 5.4 per 100,000 individuals.\(^1\) Massachusetts ranked as the 9\(^{th}\) state with the lowest murder rates, with 1.9 per 100,000 individuals—well below the Northeast region\(^2\) average of 3.5 murders.\(^3\) In 2016, Boston accumulated 36.57\% of all Massachusetts murders cases, for a rate

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\(^1\) *Crime in the United States*, FBI, *supra* note 15.


\(^3\) *Id.*
of 7.27 intentional homicides per 100,000 individuals. This 7.27 murder rate positions Boston significantly above the United States average of 5.4 and critically above the Massachusetts average of 1.9. In essence, Massachusetts is a comparatively peaceful state in relation to the rest of the United States, but Boston’s murder rate is above the national average, and significantly above the regional and state averages.

In 2016, the Osaka Prefecture police reported a total of 110 murders. This set the prefecture’s murder rate at an estimated 0.55 per 100,000 individuals—which, though significantly lower than Boston’s 7.27, was still above Japan’s 0.28 national average, encompassing 30.39% of the nation’s total murders that year. Despite Osaka having murder rates that surpass the national norm, and being historically regarded as one of the cities with the highest murder rates in the country, the Nippon city ranks number three

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84 In Massachusetts there were 134 murders, for a total population of 6,811,779. In Boston, there were 49 murders, for a total population of 673,880. *Massachusetts: Offenses Known to Law Enforcement*, FBI: UCR, https://ucr.fbi.gov/crime-in-the-u.s/2016/crime-in-the-u.s.-2016/tables/table-6/table-6-state-cuts/massachusetts.xls [https://perma.cc/9E77-A537].

85 Further contextualizing the present state of gun violence in Boston and N.Y.C., Massachusetts and New York state were tied in 2017 for second place as the States with the least gun deaths in the United States (48th and 49th respectively). In both Massachusetts and New York gun-related fatalities stood at 3.7 per 100,000 residents, and the only state with less firearm deaths was Hawaii with 2.5. This situates Massachusetts and New York well below the national average for gun-related fatalities per state, which stood at 13.6 per 100,000 residents. The list was led by the state of Alaska with a rate of 24.5 firearm-related deaths per 100,000 individuals. Gun-related fatality rates did not descend to the single-digit measurements until the 41st state in the descending ranking (Iowa, 9.0)—making Massachusetts and New York statistical anomalies. The gun-related issues of these states are grave in comparison to those of Japan, but within the U.S. national average, they fall within a moderate spectrum—evidencing the severity of the United States’ gun problem when compared to Japanese firearm social dynamics. *Firearm Mortality by State*, CTR. FOR DISEASE CONTROL & PREVENTION, https://www.cdc.gov/nchs/pressroom/sosmap/firearm_mortality/firearm.htm [perma.cc/N2KG-ZV2Y] (last updated Apr. 29, 2020).


87 *Intentional Homicides, supra* note 7; Japan, OECD BETTER LIFE INDEX, supra note 1.

on The Economist’s list of the Safe Cities Index, which speaks favorably to the safety of Japan overall. Osaka may have higher murder rates than the rest of Japan, but it is still considered a remarkably safe city from an international perspective.

The main theoretical outcomes of the high-crime micro-unit thesis are intrinsically related to murder location—an analysis of both the micro-geographical setting of the murders, as well as how they interact with the socioeconomic factors and policing structure surrounding them follows. In Boston, as mentioned above, only 1% of local youth from the ages of 15 to 24 participated in gangs, and these gangs accounted for 50% of the murders and 70% of all fatal shootings. Regarding location, 89% of street segments in Boston never withstood any reported firearm related incident, around 6% had a single firearm incident, and the remaining 5% of the street segments absorbed the overwhelming majority of gun violence and consequent murder.

What is particularly relevant for understanding the hot spot that so disproportionately represents Boston’s crime rates within a socioeconomic and policing context is that murders occur in the areas of the city most affected by inequality. These are also the areas of the city with the highest unemployment rates, the highest indexed poverty, the least police community-presence, and the least geographically integrated dispersion of police forces.

Boston’s inequality ratios are amongst the highest of any city in America. In 2014, Boston topped the Brookings Institute inequality

90 Id.
91 Braga et al., supra note 2, at 48-49.
charts with a ratio of 17.8 (when the average ratio across the United States was 9.3 for metropolitan areas and 11.8 for large cities). The gap between the wealthy and the poor remains one of the widest throughout the United States, but in 2016 Boston dropped to sixth place in the large city ranking, accumulating a still significant inequality index of 14.7. Though comparatively reducing its inequality indexes at a national level, this reduction is slight, and Boston remains a highly inequitable city.

In 2016, the city of Boston had an unemployment rate that oscillated between 3 and 4%. This is a lower figure than in previous recent years, and evidences a constant trajectory of labor rate improvement for the city. In 2014, just two years prior, the rate stood at 6%, and in 2010, it was at 8%. Unemployment is currently similar to the national average, which has stabilized around 4%. In what pertains to poverty, Boston’s relative rates are above 20%—and have been for the last decade, with few oscillations. This is significantly higher than the national average, which currently stands at around 12%.

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93 See City and Metropolitan Inequality on the Rise, Driven by Declining Incomes BROOKINGS INST., supra note 92.
97 In 2014, the unemployment rate was 5.2%, 2015 4.3%, 2016 3.5%, 2017 3.4%, and 2018 3.0%. Id. (indicating a linearly constant betterment of unemployment).
98 See discussion supra Section 2.
99 Fontenot et al., supra note 31.
pertaining to micro-locational wealth disparity concentration is that the neighborhoods with the highest murder intensity are also those most disproportionately affected by the inequality that afflicts the city. Most murders occur in the neighborhoods of Mattapan (15.1% unemployment), Dorchester (12.6%), and Roxbury (14.3%) — where most of the households earn under $20,000 in yearly income. The poorest neighborhoods are concentrated in the south of Boston — this is also the area in which most of the murders occur, and the area in which there is less geographically-integrated community police presence. There is only one police station located roughly at the geographical center between the three neighborhoods, though dislodged from the spaces in which murder cases cluster.

In Osaka, unlike in Boston, crime generally and murder in particular seems to spread itself much more evenly throughout districts — in both the prefecture and the city. In the same way, police presence disperses accordingly, and law enforcement is much more

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101 See Neighborhood Unemployment: A Technical Note, BOSTON PLAN. & DEV. AGENCY RES. DIVISION; Unemployment in Boston, BOSTON REDEVELOPMENT AUTHORITY/RES. DIVISION, supra note 100. This is particularly true in the city’s B3, B2, and northwest C11 sectors. Braga et al., supra note 2, at 49. See also Boston Police Stations, Boston Open Data, http://bostonopendata-boston.opendata.arcgis.com/datasets/e5a0066d38ac4e2abbcc7918197a4f6af_6/data [https://perma.cc/K5PW-TGKU].

102 See Neighborhood Unemployment: A Technical Note, BOSTON PLAN. & DEV. AGENCY RES. DIVISION; Unemployment in Boston, BOSTON REDEVELOPMENT AUTHORITY/RES. DIVISION, supra note 100; Braga et al., supra note 2, at 49.

more pervasive throughout the city landscape. Osaka city police categorizes murder within the nomenclature of “brutal crime,” a classification under which the authorities report all brutal crimes jointly. This definitional umbrella includes crimes like murder, robbery with assault, rape, and arson. The total reported brutal crimes within the city limits in 2016 was 342. This makes the rate of brutal crimes 2.137 per 100,000 individuals. Through data estimates, the total number of murders within the city of Osaka is projected to be approximately 30, which would convey a rate of 1.1 murders per 100,000 individuals—significantly above the prefecture’s average of 0.55; in the same way that Boston’s 7.27 murders place above the Massachusetts state average of 1.9. The state of murder in Osaka city also situates the metropolis well above the national average of 0.28 murders per 100,000 individuals.

A socioeconomic and criminal analysis of Osaka’s neighborhoods reveals that criminal activity in general, and murder in particular, are (i) low in comparison to Boston, and (ii) spread almost equally throughout the city, without attending considerably to factors of geographical accumulation of wealth. In fact, the area


106 Id.


108 The Osaka Prefecture police provide a breakdown of brutal crimes in which rapes and murders are included within the same category. The rape numbers for Japan in 2016 were 989, while there were 895 murders (including attempts)—and in the Osaka Prefecture there were 110 murders and 100 rapes. Observing the approximate 10% difference between rapes and murders both in Japan as well as in Osaka, the estimate assumed to pursue this calculation is that of a conservative 0.40 murders per 0.60 rapes. See Acknowledged Crimes in Osaka, supra note 105.

109 Id.

110 The accumulation of criminal activity in the areas most affected by inequality is not as significant, nor as exclusively centrifugal, as it is in Boston.
with the most crimes is a commercial ward, and the offenses perpetrated tend to be property crimes.\textsuperscript{111} These crimes occur in the Chūō-kō district, in which the income is higher than average for the city.\textsuperscript{112} When shifting the focus to other neighborhoods, the analysis reveals a confirmation of this pattern. The district with the most brutal crimes resulting in murder is Kita, which reports higher than average income for the city, and also reports some of the lowest levels of unemployment—sustaining an estimated 4.8 murders per 100,000 residents.\textsuperscript{113} Next, with 1.6 estimated murders per 100,000 residents, are the districts of Tenoji, (the richest district in the city, and again, in the lowest bracket of unemployment),\textsuperscript{114} and Ikuno and Naniwa (both with average household income, and average and lower than average unemployment rates respectively).\textsuperscript{115} The murder rates then diminish to estimates of 1.2 per 100,000 for the commercial district of Chūō-ku.\textsuperscript{116} In fact, Nishinari, which is the district with the lowest income within the city limits, as well as the most unemployment of all of Osaka city, holds this same reported record of an estimated 1.2 murders per 100,000 residents.\textsuperscript{117} It is worth mentioning that Nishinari is the district with the second highest count of brutal crimes with 47 (after the commercial district of Chūō-ku with 56), but most of them involve robbery.\textsuperscript{118} The rest


\textsuperscript{111} See Japanese Census, supra note 110; Public Assistance Rates, supra note 110; \textit{Hatena Blog, supra note 110}; \textit{Acknowledged Crimes in Osaka, supra note 105}.

\textsuperscript{112} See Japanese Census, supra note 110; Public Assistance Rates, supra note 110; \textit{Hatena Blog, supra note 110}; \textit{Acknowledged Crimes in Osaka, supra note 105}.

\textsuperscript{113} See Japanese Census, supra note 110; Public Assistance Rates, supra note 110; \textit{Hatena Blog, supra note 110}; \textit{Acknowledged Crimes in Osaka, supra note 105}.

\textsuperscript{114} See \textit{Hatena Blog, supra note 110}.

\textsuperscript{115} See Japanese Census, supra note 110; Public Assistance Rates, supra note 110; \textit{Hatena Blog, supra note 110}; \textit{Acknowledged Crimes in Osaka, supra note 105}.

\textsuperscript{116} See Japanese Census, supra note 110; Public Assistance Rates, supra note 110; \textit{Hatena Blog, supra note 110}; \textit{Acknowledged Crimes in Osaka, supra note 105}.

\textsuperscript{117} See Japanese Census, supra note 110; Public Assistance Rates, supra note 110; \textit{Hatena Blog, supra note 110}; \textit{Acknowledged Crimes in Osaka, supra note 105}.

\textsuperscript{118} See \textit{Acknowledged Crimes in Osaka, supra note 105}.
of the city, including average and above average income districts, vary between no murders and 0.4 murders per 100,000 residents in general.\textsuperscript{119}

The above paragraph does not intend to assert absolutely that Osaka is a metropolis without contrasts in what pertains to socioeconomic divergences. Both the city of Osaka and the prefecture surpass the national average of residents receiving welfare, albeit while being one of the nation’s most prominent capital-generating engines—and though the dispersion of said welfare benefits tends to be generally diffused throughout the districts, there are several pockets of poverty concentration like the Nishinari or Naniwa districts.\textsuperscript{120} The average rate of welfare recipients in Japan tends to be between 10 and 20 individuals per 1,000 during periods of economic stability.\textsuperscript{121} However, at a prefectural level, within the last decade, Osaka has increased its welfare recipients to rates that are above 30 individuals per 1,000. In 2011, the average number of recipients in Japan was 16.4 per 1,000 compared to 33.9 in Osaka’s Prefecture.\textsuperscript{122} In recent history, the city itself has also increased its necessity for governmental assistance steadily. In the last two decades Osaka city has incremented its welfare recipients from those similar to national averages, oscillating between 10 to 16 individuals per every 1,000, to having above 50 residents per 1,000 in need of benefit programs.\textsuperscript{123} Many of the above-mentioned districts like Naniwa and Ikuno receive assistance that is significantly above average (103.8 and 73.1 per 1,000, respectively).\textsuperscript{124} A special mention, again, is required for

\textsuperscript{119} Id.
\textsuperscript{121} See Poverty Research Seminar, supra note 58; Public Assistance Rates, supra note 110; Public Assistance Rates, supra note 110. Welfare recipiency in Japan stood at approximately 25 per 1,000 individuals in the post-war era, moving into standards oscillating between 15 and 5 since then, and until an abrupt variance immediately following the 2008 crisis, where welfare recipient rates would ascend to 25 per 1,000 once again.
\textsuperscript{122} See Poverty Research Seminar, supra note 58; Public Assistance Rates, supra note 110.
\textsuperscript{123} See Poverty Research Seminar, supra note 58; Public Assistance Rates, supra note 110.
\textsuperscript{124} See Poverty Research Seminar, supra note 58; Public Assistance Rates, supra note 110.
Nishinari, which has received welfare assistance at rates of 234.7 per 1,000 district residents. The most relevant derived data for the purposes of this analysis is that, despite the signals of poverty (or more accurately, of public intervention to prevent poverty), these figures don’t seem to translate into higher murder rates in the disproportionately affected districts—as they do in Boston. The data also reinforces the assumption that in Osaka, individuals with different levels of wealth live in comparatively integrated locations, with districts housing economically diverse population, unlike in Boston. In fact, Tennoji, the city’s wealthiest district as it pertains to income per capita, still had a number of residents above the national average that qualified to receive government assistance (at 23.6 per 1,000) in 2012. Overall, the unemployment rate in Osaka, like that of Boston, has been decreasing throughout the last decade. In 2019, the professional inactivity indicators stabilized at 3.2%—a recovering standard from previous years, as in 2016 the city suffered 4% unemployment rates, and in 2013 the city sustained a 4.8% rate.

Singularly pertinent to this examination of the location of murder in Osaka, and a key structural difference with Boston, is the geographical disposition and arrangement of the police forces. Police stations (hereinafter referred to as “koban”) in Osaka are allocated throughout the city. In Boston there are 12 police stations, outlying the communities they serve; whereas in Osaka there are 649 koban, and they are spread all throughout the neighborhoods in an almost ubiquitous manner, iterating every several city blocks. Nishinari alone, the poorest district of Osaka, has twelve of these koban. Tennoji, the richest, has seven. For comparison, Ikuno

125 See Poverty Research Seminar, supra note 58; Public Assistance Rates, supra note 110.
126 See Public Assistance Rates, supra note 110.
128 Koban Index, OSAKA PREFECTURAL POLICE, supra note 104.
has ten, Chūō-ku has nine, and Naniwa eight. This geolocational structuring and spatial distribution of police resources presents a disjunctive organizational model. In Boston, police stations are far more geographically isolated and diffused; whereas in Osaka, koban are spatially pervasive—necessarily inserting themselves into the geographic heart of neighborhood social and economic interactions.

This Paper will now examine more closely the potential analytic value and translatability of the high-crime micro-unit thesis. The hot spot theory posits that the analysis of gun violence and murder is better understood through the lens of (i) specific locations in which crime will gather, and (ii) specific concentric social groups that perpetrate them. The first hypothesis of crime presented by the hot spot theory (geographic concentration of murder) does not hold up to a comparative analysis with the city of Osaka. This is due to the fact that crime in general, and murders in particular, are spread across the Japanese city with significantly less conglomeration than in Boston. Criminal accounts of murder appear to be arrayed subject to factors that are not dictated by, or subject to, the socioeconomic situation of their residents, unlike in Boston.

The second foundational claim of the hot spots theory is the prediction that murders will be highly concentrated in relation to its enacting agents. By observing the highly limited group of people perpetrating murders in Boston, the hot spot theory projects that murders are disproportionately committed by a small, concentrated, and concentric group of people that operates within the same cohesive network of crime. Osaka’s murder patterns defeat this prong of the theory as well. The reason for the lack of translatability is that, in Osaka city and prefecture, there is almost no recidivism. In fact, recidivism is so low in Japan that by 2005, only five cases of

133 See Braga et al., supra note 2, at 48.
134 Id.
135 Id.
murder from the last 1,768 presented recidivism.\textsuperscript{136} This may be due to the fact that murders are generally spontaneous and occur principally in the context of trivial disputes—except in highly unlikely anomalies like murders perpetrated by the Yakuza crime organizations.\textsuperscript{137} Specifically, in the Osaka Prefecture in 2017, there were a total of 106 murders.\textsuperscript{138} For these 106 murders, there were 103 different individuals arrested.\textsuperscript{139} In 2018, there were 114 murders and 114 different individuals arrested;\textsuperscript{140} statistics that exhibit a high disparity with the high concentration of perpetrators present in Boston.

In conclusion, Boston and Osaka present vastly different narrative scenarios pertaining to their states of murder—both regarding location dispersion, as well as the individuals that perform it. This is because in Boston (i) murders are acutely concentrated in their geographical allocation, and (ii) the criminal action of intentional homicide is realized by a small group of perpetrators—in particular, located within the geographical spaces most disproportionately affected by inequality, which suffer the lowest income, display the highest unemployment rates, and comprise lower geographical distribution of integrated-stationed police. By contrast, in Osaka (i) murder is spread proportionately and uniformly throughout the city, (ii) with near non-existent levels of recidivism—and criminal activity mapping does not attend to the particular socioeconomic factors of wealth distribution, as crime

\begin{footnotesize}
\begin{enumerate}
\item See Hiraiwa-Hasegawa, supra note 6, at 334.
\item See Changes of Numbers of Serious Crimes per Year, supra note 103.
\item Id.
\item Id.
\end{enumerate}
\end{footnotesize}
Comparative Analysis of Murder Rates

mobility and dispersion are much more ubiquitous and geographically equitable, and police presence geolocation is significantly diffused throughout neighborhoods, and integrated within them. Further, not only is the geographical organization of crime divergent between these two cities, but the difference between the resulting murder rates is also critical. In Boston, the murder rates are significantly higher than in Osaka. However, this does not necessarily deny the hot spots theory, or imply its comprehensive failure. One likely explanation inferred from the data may be that of a categorical inapplicability of the theory at cross-cultural, international, or multi-city systemic scopes—at least in what refers to Japan generally, and Osaka in particular. A second explanation may reveal that Japan is ahead of the curve in murder prevention—that the hot spots theory may not be applicable because it has already been resolved through the resolution of structurally differential elements like (i) geographic socioeconomic integration, and (ii) equitable areal distribution of police or other conflict-resolution and safety resources. This proposition of a post-hot spot scenario is a potential interpretation of the data if socioeconomic factors of inequality, and localization of poverty and unemployment, are believed to play a role in the increase or decrease of murder rates within a community. Osaka does not present these trends (geographically demarcated inequality and lack of police presence in the areas most affected by inequality) with the intensity that Boston does, and consequently presents lower murder rates. In other words, the hot spots theory may be applicable, accounting for the fundamental socioeconomic difference between Osaka and Boston—which is that of the disproportionate affectation of particular geographic pockets by economic inequality, unemployment, and poverty in Boston; an inequity phenomenon that does not exist at the same scale in Osaka—and which is perhaps preemptively resolved by effective welfare systems that prevent inequality conglomeration, strengthen socioeconomic neighborhood integration, and promote geographical dilation of social safety resources (including the police). At a resource allocation level, the territorial ubiquity of police presence is a crucial structural distinction in murder prevention activity between the two cities, which in Osaka seems conducive to significantly lower levels of murder, and a lack of its geographical localization in socioeconomically depressed hot spots. Pervasive police presence, or that of other social safety resources, paired with higher
socioeconomic integration across neighborhoods, may (i) reduce overall rates of crime and murder, and (ii) prevent the localization of crime both geographically and in those who commit it.

3.3. New York and Tokyo

This section will engage in a comparative analysis of another two cities: New York and Tokyo. The evaluation of the state of murder will follow the framework utilized in the prior section. This contrastive control segment will examine the dynamics of murder in both New York and Tokyo, and how they are integrated and interrelate with their geographically-dependent standing, sociodemographic environment, and with the conditions and infrastructural deployment of the cities’ respective police forces. Once potential patterns regarding the geolocation of murders are discerned within the larger sociodemographic and policing framework, the applicable capabilities of the hot spot theory will be assessed.

In 2016, New York state ranked thirtieth out of fifty states in the United States for the lowest murder rate, with 3.2 intentional homicides per 100,000 residents.\textsuperscript{141} These numbers were not only below the national average of 5.4, but also under the Northeast regional average of 3.5.\textsuperscript{142} In 2017, New York state’s rate was that of 2.8 murders per 100,000 residents, continuing a downward trend that had been ongoing since the State exhibited rates of 4.5 in 2010.\textsuperscript{143} This progression has left New York state’s murder rates almost unrecognizable from the late 1980s and early 1990s, when the standards had stabilized between 10 and 15 murders per 100,000 residents—numbers to which New York City contributed considerably.\textsuperscript{144} During the 1990s, the rates dropped from averages of over 14 murders per 100,000 people at the beginning of the decade and normalized at rates that approximated 5 by the decade’s

\textsuperscript{141} Crime in the United States by Region, Geographic Division, and State, 2015-2016, supra note 82.

\textsuperscript{142} Id. For a more focused analysis of gun violence in New York, see discussion supra note 85.

\textsuperscript{143} Id.

conclusion—a trend that would continue throughout the 2000s (with rates above 4) and into the 2010s, reaching historic all-time lows in recent years with average rates approximating 3 murders per 100,000 individuals.\(^{145}\)

New York City has seen an almost constant decrease in murders throughout the last decade, achieving a murder rate of 3.9 per 100,000 residents in 2017—under the national average, but over the regional average.\(^{146}\) In 2018, there were a total of 295 murders in the city, a significant decrease of 56.17% from 673 murders in 2000, after a historic low of 292 in 2017.\(^{147}\) However, most recently, this trend appears to be destabilizing, as “[m]ore than 300 people were murdered in 2019, [for] an increase of nearly 8% compared with 2018, and the highest number in three years, according to police statistics.”\(^{148}\)

In 2016, Tokyo Prefecture had a total of 80 murders, for a rate of 0.629 murders per 100,000 individuals.\(^{149}\) In 2017, the number of


\(^{146}\) Seven Major Felony Offenses, N.Y.P.D., supra note 145.

\(^{147}\) Seven Major Felony Offenses, N.Y.P.D., supra note 145.


\(^{149}\) “Hasseijyokyo/Tokei” Metropolitan Police Department Crime Statistics, TOKYO METROPOLITAN POLICE DEPT., https://www.keishicho.metro.tokyo.jp/smph/
murders in Tokyo increased to 99, averaging 0.72 murders per 100,000 citizens within the city limits—situating itself above the national average of 0.2. Despite this recent slight upturn, Tokyo’s murder rates have been continuously declining throughout recent history—during the last decade, the total murders for the Tokyo Prefecture stabilized between 80 and 126. Although the city places above the national average rates, Tokyo (like Osaka) made it into the 2017 ranking of The Economist’s list of the Safe Cities Index. Osaka occupied the third place on the list with an overall safety score of 88.87, while Tokyo was ranked as the safest city in the world with a score of 89.80. New York is ranked twenty-first, with a score of 81.01, and Boston does not appear in the list.

As established in prior sections, the high-crime micro-unit theory focuses on the recurrence of murder in specific locations and the repeated identity of a small group of perpetrators. The section will now proceed to analyze the extent to which the theses that this model is predicated upon can be applied to the cities of New York and Tokyo. To better understand both cities’ murder rates in a broader and integrated public context, an analysis of its relationship with selected socioeconomic indicators from New York is necessary. In 2014, N.Y.’s metropolitan area ranked second-highest in income inequality in the United States, behind only Connecticut. As a city, New York ranked as the tenth most affected by wealth disparity

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151 Intentional Homicides, supra note 7; Japan, OECD BETTER LIFE INDEX, supra note 1.

152 Tokyo’s murder count of 126 took place in 2014 (the highest since 2008, and until measured by this study). “Hasseijyokyo/Tokei” Metropolitan Police Department Crime Statistics, supra note 149.

153 This ranking analyzes and measures cities’ overall safety and creates indexes attending to indicators such as personal security, infrastructure security, health security, and digital security. THE ECONOMIST, supra note 89.

154 Id. (regarding personal security (which includes violent crime and murder) Osaka ranked as the 3rd safest in the world, with a score of 91.59, Tokyo ranked 4th with a score of 91.57, and New York ranked 25th, scoring 80.89).

155 City and Metropolitan Inequality on the Rise, Driven by Declining Incomes, BROOKINGS INST., supra note 92.
in the United States with a 14.1 income inequality ratio.\textsuperscript{156} In 2019, the New York metropolitan area remained second to Bridgeport, CT, in disproportionate capital distribution; while N.Y.C. ranked eighth amongst American cities with an inequality rate of 14.7—following an upward trend in wealth disparity.\textsuperscript{157} A closer look at the actual socioeconomic divide in New York City in terms of Gini coefficients reveals a much more complex truth, as the rates signal an inequality that stands at 0.5136—above the already comparatively high national average of 0.415.\textsuperscript{158} For the last decade, approximately one in five New Yorkers have lived in relative poverty, and almost half of the households are considered poor or living in near-poverty conditions.\textsuperscript{159} Relative poverty rates in N.Y.C. affect roughly 20% of the population, and are therefore higher than the national average of 12%.\textsuperscript{160} Two sentences that grippingly capture the levels of inequality in N.Y.C. are the following: “One in five New Yorkers lives below the poverty line, while the top 5% of Manhatttanites earned more than $860,000 in 2014,” \textsuperscript{161} and “[a] census tract bordering Central Park in the Upper East Side has a median household income greater than $200,000, while just blocks away in East Harlem, household income is under $16,000.”\textsuperscript{162} It is safe to assume that New York’s wealth disparity and income inequality are

\begin{thebibliography}{9}
  \bibitem{footnote156} \textit{Id.}
  \bibitem{footnote157} \textit{City and Metropolitan Income Inequality Data Reveal Ups and Downs Through 2016,} \textsc{Brookings Inst.}, \textit{supra} note 94.
  \bibitem{footnote161} \textit{Wealth Divides, ESRI, supra} note 159.
  \bibitem{footnote162} \textit{Id.}
\end{thebibliography}
substantial—and this unequal distribution of wealth is significantly geographically determined, subject to strictly partitioned areal demarcations.

In Manhattan, in particular in the south of the island and in the upper east and upper west ends, yearly income per household is generally above $100,000.\footnote{See Andy Kiersz, Here’s a Block-By-Block Look at Who’s Making How Much Across NYC’s 5 Boroughs, BUS. INSIDER (Dec. 11, 2014), https://www.businessinsider.com/new-york-city-income-maps-2014-12 [https://perma.cc/U3QN-M2EQ] [hereinafter NYC Block-by-Block Look].} However, in the Bronx and sectors of Southwest Brooklyn, income tends to be under $20,000.\footnote{Id.} In New York City, the locations affected negatively by inequality (those in which poverty rates and unemployment are most intense) coincide with the geographical locus of a higher concentration of murders.\footnote{See N.Y.C. Crime Map, infra note 181; discussion supra note 22.} Historical relative poverty rates in the Bronx stabilized around the 25% mark, reaching 27.5% in 2015.\footnote{Poverty Measure 2005-2016, supra note 160.} In Brooklyn, these rates peaked for the decade in 2012, with 22.3% poverty; decreasing to 20.5% households in poverty in 2016.\footnote{See Poverty Measure 2005-2016, supra note 160.} Comparatively, Manhattan had poverty rates of 13.9% that same year.\footnote{See Poverty Measure 2005-2016, supra note 160.}

Like poverty, unemployment in New York City tends to accumulate in sectors of Brooklyn and the Bronx as well. After reaching levels of over 10% consequent to the 2008 economic collapse, unemployment in N.Y.C. is now stable at around 4\%\footnote{Labor Statistics for the New York City Region: Revised 2014-2018 Borough Labor Force Data, N.Y. ST., https://www.labor.ny.gov/stats/nyc/ [https://perma.cc/SAK3-LN2H] (last visited Apr. 24, 2019) (listing basic labor statistics for N.Y.C. over various years).} Labor inactivity rates for the city are comparable to national averages, though they are lower than the regional average, which in 2019 settled at about 10%.\footnote{U.S. CENSUS BUREAU, CURRENT POPULATION SURVEY: 2018 ANNUAL SOCIAL AND ECONOMIC SUPPLEMENT, www2.census.gov/programs-surveys/cps/techdocs/cpsmar18.pdf [https://perma.cc/MRX5-TXKA] (last visited Apr. 17, 2019).} The Bronx and Brooklyn show unemployment rates above the city average, but lower than that of the regional average. In 2014 the Bronx suffered 10% unemployment, which descended to 7.1% in 2016, and in 2019 rested
at 5.6%. \textsuperscript{171} In Brooklyn, a county that doubles the Bronx in population and exhibits more economic diversity, unemployment rates have descended from around 8\% in 2014, to an average of 4.2\% in 2018.\textsuperscript{172} The areas of N.Y.C. where the most murders occur are the areas most affected by inequality, including certain parts of the Bronx and Brooklyn which in turn exhibit the lowest income and the highest unemployment rates. \textsuperscript{173} This data shows higher unemployment rates in murder-concentration areas than in the comprehensive city dynamics, though absent significant contrast; and it also signals a continuous descent, which has generally been accompanied by a decline in murder rates as well.\textsuperscript{174}

Though crime rates are the highest in the “Manhattan South Precinct,” most are against property—only two murders occurred throughout 2018 in this location. This pattern resembles Osaka’s Chūō-ku district with its high-in-crime but low-in-murder trends.\textsuperscript{175} In New York City, murder locations are both progressively reducing and, unlike in Osaka, consolidating. In recent years, many precincts in New York have had between 0 and 2 murders. However, there are certain precincts that report disproportionate murder rates.\textsuperscript{176}

As stated above, murders in N.Y.C. are concentrated geographically in very specific locations,\textsuperscript{177} and these locations also tend to be the areas of the city most affected by inequality.\textsuperscript{178} Murder is intensively condensed in areas of the Bronx and areas of Southwest Brooklyn. The Bronx precincts, in 2018, saw 81 of the


\textsuperscript{172} Id.

\textsuperscript{173} See \textit{N.Y.C. Crime Map, infra note 181; NYC Block-by-Block Look, supra note 163}.

\textsuperscript{174} The recurring nature of this data point in the U.S., Boston, and N.Y.C., may suggest that employed people (or people with access to a stable, legal source of income) are less likely to participate in murder. \textit{Id. See also discussion infra note 207}.

\textsuperscript{175} See discussion \textit{supra} Section 3.2.


\textsuperscript{177} See \textit{N.Y.C. Crime Map, infra note 181; NYC Block-by-Block Look, supra note 163}.

\textsuperscript{178} Id.
city’s 252 total murders. This means that 32% of the murders occurred in the Bronx, where only 17% of the population lives. In particular, the 42nd, 48th, 32nd, and 40th police precincts recorded murder rates per 100,000 individuals of 18.81, 15.61, 16.92, and 13.12 respectively, specifically conglomering in Belmont and East Tremont (which suffer poverty rates of 30.3%) and areas between Concourse and High Bridge (sustaining poverty rates of 32.4%). Accompanying these northern Harlem and Bronx precincts in murder concentration rates is a small cluster of precincts within South Brooklyn. In this area, 5 out of the 133 city-wide precincts accounted for 16% of all murders in 2018—specifically affected were the 77th, 73rd, and 79th precincts, with respective murder rates of 18.73, 18.5, and 15.51 murders per 100,000 individuals. These murders cluster in areas of Crown Heights and Brownsville, which suffer the highest poverty rates in Brooklyn with 29.4%. A quick glance at crime maps provided by the New York City Government provides an insightful understanding of how disproportionate the situation is in terms of the geographical accumulation of murder, and how it correlates with geographically-demarcated inequality.

Unlike New York, Tokyo shows some of the same tendencies as Osaka: murders are spread throughout the city and do not seem to attend to socioeconomic disparities manifested in the form of wealth. First, while New York’s disparity is heavily dependent upon geographical conditions, Tokyo does not have the same

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179 Id. See also Precincts, N.Y.P.D., https://www1.nyc.gov/site/nypd/bureaus/patrol/precincts-landing.page [https://perma.cc/Y8HR-4GKC] (last visited Apr. 24, 2019); Seven Major Felony Offenses, N.Y.P.D., supra note 145.


182 Id.

183 Id.

184 See N.Y.C. Crime Map, supra note 181. However, unlike Boston, murders tend to congregate around the areas most affected by inequality in general, and not necessarily specific streets. For the analyzed time-frames, geolocational repetition is scarce.
cleavages in income by district.\textsuperscript{185} Residential inequalities by district that provoke socioeconomic segregation are absent as a result of coordinated capitalism, state and urban policy, and work-location and commute patterns.\textsuperscript{186} This is not to say that there are not districts that house the wealthy in Tokyo. There are indeed income inequalities that represent themselves through district and ward lines. However, the differential element of inequality is not based strictly on the district in which the residents live rather how much space their houses occupy within the district, \textsuperscript{187} creating a socioeconomically integrated urban wealth network that is unlike the heavily economically partitioned New York. Pertaining to the historical trajectory of inequality, wealth disparity amongst districts has grown in recent years in both New York and Tokyo, but to a different degree. While income inequality between boroughs doubled in New York between 1970 and 2000, Tokyo’s inequality among districts grew only 16\%.\textsuperscript{188} Japan is the biggest economy in the world with the “most equal wealth distribution,”\textsuperscript{189} and Tokyo follows the same conceptual pattern as a city.

The city analysis of inequality in New York and Tokyo reveals similar patterns as laid out by national trends in the United States and Japan respectively. New York, like the United States, exhibits an incremental and linear trend towards increased inequality; while in Tokyo, like in Japan, the trend is cyclical and not attached to specific geographical delineations, reflective of a more economically uniform Japanese society.\textsuperscript{190} Inequality in Tokyo becomes most

\textsuperscript{185} RESIDENTIAL SEGREGATION IN COMPARATIVE PERSPECTIVE: MAKING SENSE OF CONTEXTUAL DIVERSITY (Thomas Maloutas & Kuniko Fujita eds., 2012).

\textsuperscript{186} Residential patterns are necessary when establishing the differences between New York’s economic segregation and the comparatively lesser socioeconomic partitions encountered in Tokyo’s geolocation of wealth and poverty. \textit{Id}.

\textsuperscript{187} \textit{Id}.


\textsuperscript{189} CREDIT SUISSE RESEARCH INSTR., \textit{GLOBAL WEALTH REPORT 2018} 48 (2018), [https://perma.cc/LQN4-9JZD] (analyzing the economies and relative wealth of several of the world’s major economies, establishing that “Japan has a more equal wealth distribution than any other major country”).

\textsuperscript{190} Fujita & Hill, \textit{Place Stratification in Tokyo and New York}, supra note 188.
apparent when comparing the center of the city with the suburbs. This means that inequality among districts within the city is not as significant as the variance found when the city is compared to its metropolitan area, a capital wealth discrepancy that has expanded in recent years. Income inequality ratio between the city center and the suburbs of Tokyo has increased from 118% to 137% wealth accumulation disparity during this decade, though these numbers are still nowhere near the inequality ratios found in New York, where a couple blocks can signify a rupturing distance between poverty and capital wealth. In essence, on matters pertaining to inequality, the main difference that Tokyo presents with New York is that, while in New York geographical areas are populated by either the rich or the poor, Tokyo’s inequality is not as pronounced and is not as dependent upon geographical boundaries. Tokyo has a social structure in which the inhabitants of its residential wards are more socioeconomically integrated throughout districts and amongst occupational groups.

Moving on to unemployment in Tokyo, rates are currently stabilized at 2%—lower than the national average of 2.5%. This follows a positive trend as the city responded to the 2008 economic crisis with an unemployment response that reached 5.5% in 2010. There has been a constant decline in labor inactivity in the city since the disruptive effects of the economic downturn, with 2016 seeing a 3.2% unemployment rate. In the same way that income per household does not abruptly diverge by district, Tokyo presents more balanced unemployment rates per district than New York. Regarding governmental support of the poor, the Tokyo Prefecture, like Osaka, required welfare distribution at a higher rate than the national average. The number of Tokyoites who received welfare

\[\text{192 Wealth Divides, ESR, supra note 159. See also discussion supra note 188.}\]
\[\text{193 Fujita & Hill, supra note 188.}\]
\[\text{195 Id.}\]
\[\text{196 Id. (showing 2014’s increased unemployment rate would coincide with the only growth in murder rates, increasing nationwide from 370 to 395, then reducing again in 2015 to 363 and in 2016 to 362).}\]
was 21.2 per 1,000 while the national average was 16.4. \textsuperscript{197} Nonetheless, the need for welfare distribution was relatively consistent across Tokyo’s districts.\textsuperscript{198}

When observing murder counts as a function of the districts in which they occurred, it becomes apparent again that, like Osaka and unlike Boston and New York, Tokyo’s murders do not strongly correspond with socioeconomic indexing elements or their corresponding sociodemographic divides. In other words, murder geolocation in Tokyo is not determined by socioeconomic district or neighborhood lines like it is in New York. Tokyo’s District 7 has the most murders in the city, but it is also geographically the largest, and not disproportionate in terms of income, welfare needs, or unemployment when compared with the rest of the city’s districts. It is followed in total murder count by District 3 with 13 murders, District 6 (11), District 2 (10), District 10 (9), District 4 (7), District 1 (6), and District 5 (5).\textsuperscript{199} These murder rates appear proportional to size and population density, and do not appear to be disproportionately affected or conditioned by socioeconomic dynamics.\textsuperscript{200} District 10 and District 6 have the highest rates of welfare recipients in Tokyo, and their murder rates sit amongst the districts’ average. Meanwhile, District 3 is overall the most socioeconomically privileged and least affected by inequality in that its residents receive below average government assistance in all its composing neighborhoods,\textsuperscript{201} and yet it has more murders than both District 10 and District 6. In other words, District 3, which receives comparatively low governmental subsidies and includes the third, sixth, and seventh wealthiest wards, out of 23 total, has a higher murder rate than districts with socioeconomic indicators that reflect higher indexes of poverty.\textsuperscript{202} This challenges the patterns observed in New York and Boston, cities in which the location of murder is associated with areas that are more affected by inequality. These observations also confirm the patterns observed in Osaka, where

\textsuperscript{197} See Public Assistance Rates, supra note 110.
\textsuperscript{198} Id.
\textsuperscript{199} See 2017 Tokyo Police Statistics, supra note 150.
\textsuperscript{200} Id.
\textsuperscript{201} See Public Assistance Rates, supra note 110; 2017 Tokyo Police Statistics, supra note 150.
\textsuperscript{202} See Public Assistance Rates, supra note 110; 2017 Tokyo Police Statistics, supra note 150.
murders do not ascribe to socioeconomic beacons of poverty or unemployment. As a useful representation of this dissonance, in Tokyo, the highest concentration of wealth based on average income per household is in District 1, which includes Minato, Chiyoda, and Chuo wards. This does not mean that murder disappears entirely or are abruptly reduced in comparison to other areas of the city, like it tends to signify in New York. Murder rates in District 1 actually remain similar to city averages—suggesting again that murders are not determined by the status of geographically demarcated socioeconomic inferences. Another example that corroborates this hypothesis can be found by digging deeper into the information provided by the case of Tokyo’s District 6. Some of the neighborhoods with the least income per household are located in this area. This district is formed by Adachi, the ward with the lowest income per household; Arakawa, which ranks twentieth out of Tokyo’s 23 total wards in total wealth per household; and Taito, which ranks sixteenth. District 6 is geographically large and receives a higher than average proportion of welfare. Yet, there were only 11 murders throughout the district of the total 80 murders in the city in 2017, indicating a lack of concentration in communities affected by inequality like in the Bronx and Southwest Brooklyn. Police distribution in this Tokyo district is also geographically interspersed and, unlike in Boston, police geolocation does not appear to correspond to an area’s income. District 6 has 84 koban, compared to District 1’s 76, or District 5’s 44 koban.

The analysis of New York and Tokyo provides similar results as that of Boston and Osaka. Murders in New York, like in Boston are concentrated in the neighborhoods most affected by inequality, while in Tokyo, like in Osaka, murders do not seem to attend to, or be as determined by, geographically-conditioned socioeconomic divisions. N.Y.C. conveys signals that it is becoming increasingly dissimilar in wealth parity and geographical distribution of income—following the same trend as the United States—and with this increase in geographically determined inequality, murders continue to concentrate in the areas most affected by poverty and

203 See Public Assistance Rates, supra note 110; 2017 Tokyo Police Statistics, supra note 150.


205 See 2017 Tokyo Police Statistics, supra note 150.

206 Id.
unemployment. However, it is worth mentioning for clarity purposes that in N.Y.C., this last factor is less determinative than in Boston; unemployment rates in the communities in which murders are disproportionately perpetrated in New York are higher, but not as significantly as they are in Boston.207

The hot spot theory suggests that the analysis of murders must be focused on individual streets and that murders are perpetrated by a particularly small group of recurring individuals. The analysis of New York and Tokyo partially disproves the multi-city applicability of both elements of this theory. This Paper will first attend to the initial micro-unit thesis prong: geographical concentration of murder. New York responds to the same archetypal murder concentration as Boston, but seemingly attending to different levels of micro-unit intensity and dispersing into broader areal progressions. Though not an absolute contravention of the micro-unit thesis, the data presents further pertinency and potential policy value in attending to a macroeconomic and dispersed-scale socioeconomic-groupings approach to murder, rather than adjusting to a micro-locational lens for the purposes of addressing the underlying influencing elements to murder. In confirmation of the micro-unit thesis, murders in N.Y.C. appear to be progressively and disproportionately clustering into specific precincts, in particular within the areas most affected by inequality.

Tokyo’s data, like Osaka’s, does not leave space for the salvaging of potential direct applicability regarding the first prong of the micro-unit theory. Murder in Tokyo occurs in a widespread manner throughout the city in a way that remains unresponsive to socioeconomic divergences. Unlike in N.Y.C., murder patterns in Tokyo do not respond to geo-specific socioeconomic disparity inferences, and this may be due to the fact that the city is not as socioeconomically divided—both regarding general affectations of inequality as well as the geographical allocation of inequality. Indirectly, however, Tokyo’s murder data does not necessarily imply a comprehensive failure of the hot spots theory. With significantly lower murder rates among all districts, the hot spots thesis holds potential value in that Tokyo, like Osaka, may be

207 This brings into question matters not only of unemployment, but of the quality of employment available in these geographical enclaves, paired with educational restrictions and other accompanying sociodemographic factors.
evidence that the problems affecting Boston’s and New York City’s comparatively high and geographically condensed murder rates can be resolved through appropriate policy design and effective implementation. Just because murder is not as quantitatively significant or intensely concentrated in the selected Japanese cities, this does not mean that it cannot or could not be. The current state of murder in Tokyo could be conveying that the pertinent policy authorities and the police have resolved the issues of murder quantity and concentration through appropriate and efficient deployment of their capacities, or that social public policies may have averted excessive pockets of socioeconomic inequality, addressing an underlying causative foundation of murder. In this regard, the suitability of the theory may entail that Tokyo is ahead of the policy curve, and the city may have addressed the geographical micro-unit problem before it arose by (i) enacting policies dedicated to averting socioeconomic inequality or at least preventing capital disparity from being intensely area-specific, and (ii) spreading its police resources as community-focused safety services throughout the city in a comparatively pervasive manner, allowing officers to become a part of the communities’ social fabric.

The second theoretical proposal of the hot spot doctrine is that a very small group of individuals will execute most of the gun violence and commit most of the murders. This is not the case in New York to the extent it is in Boston. A 2010 report issued by the New York State Department of Corrections and Community Supervision quantified recidivism rates as follows: only 38% of people who were imprisoned for their crime returned to prison in N.Y.C. The rates within the city were the lowest in the state, as upstate New York had recidivism standards of up to 49%. The crime with the lowest recidivism rate in N.Y.C. was murder with 13%, followed by manslaughter at 17%. In the case of Tokyo, recidivism is minimal and follows the general pattern found in Japanese national criminal statistics. Recidivism is almost non-existent in Japan—by 2005, only five of the prior 1,768 murder cases


209 Id.

210 Id.
presented recidivism, which was less than 0.3%. In Tokyo, for the 99 murders documented in 2017, 98 different people were arrested. This data suggests that murder in New York and Tokyo, unlike in Boston, is perpetrated by a varying group of individuals. Another differential element between Boston and Tokyo which may help explain the inapplicability of the hot spot theory to Tokyo is that of the underlying human capital patterns to murder and their adjacent criminal motivation. Perhaps in Boston the high-crime micro-unit theory is useful because of the purpose of the crime, in concomitance with its natural geographically conglomerative tendencies. Gang associations and their derivative violence, which the hot spot theory directly points to as a major source of murder, are highly concentrated and involve perpetrators operating in intensively concentric geographical spaces and social circles. However, in Tokyo, perpetrators do not operate in concentrated geographical spaces, nor do offenders participate in multiple acts of murder. This may indicate a less significant presence of gang activity, a less condensed areal presence of gang activity, or a detachment between gang activity and murder. In turn, this potentially signifies that gang activity may be less overall, be less visible or impactful on social violence, or that the result of gang activity does not manifest in the form of intentional homicide.

A major structural difference that emanates from both cities’ analysis is the divergence among geographical presence of police. A police infrastructural comparison between Tokyo and New York reveals the same pattern as that of Boston and Osaka—a significantly more integrated police presence in Tokyo than what is found in New York. While New York has 133 precincts, Tokyo police spreads its roots deep into every neighborhood with a total of 1,183 koban. The objective of this profound geographical pervasiveness, not only in Tokyo but throughout Japan, is that of developing community policing. Community policing creates a

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211 Hiraiwa-Hasegawa, supra note 6, at 334.
212 See 2017 Tokyo Police Statistics, supra note 150.
nexus of identity between individuals and their neighborhood police officers, which provides for an integrated and cohesive conceptualization between police roles and the socioeconomic interactions of the communities they participate in and serve.\textsuperscript{214} Though the New York Police Department has made tremendous efforts to pursue similar goals and obtain similar results through its neighborhood policing program, “One City: Safe and Fair—Everywhere,”\textsuperscript{215} and “build the block” initiatives,\textsuperscript{216} the difference between both nations’ police networks remains predicated upon the geographical ubiquity of the Japanese koban against the relatively isolated nature of the U.S. police station. It is entirely possible that, among other factors, the initiatives deployed in New York City in pursuit of community policing have contributed to the steady decline in the city’s murder rates. However, the New York police still lack the geographical dispersion found in Japan, which may present barriers to community-policing and its attached social integration.

New York’s state of murder presents a more analogous archetype to Braga et al.’s theory than that displayed by Japan’s cities, revealing an inherent intra-cultural consistency. Murders in Tokyo remain comparatively lower than both Boston’s and New York’s, occurring throughout the city’s landscape, and presenting almost non-existent recidivism. The structural differences found by this Paper’s contrastive analysis are related to the spatial dissemination and distributive configuration of police resources.

\textsuperscript{214} The notion of integrated community policing will be further developed in Section 4.

\textsuperscript{215} In 2015, Mayor de Blasio announced the constitution of a program projected as a “comprehensive approach designed to fully engage community as coequal partner to keep neighborhoods safe, support officers, and keep crime at historic low levels.” The specific strategies set forth by these policies pursue community-building through, for example, the “true sector integrity” concept, which delegates “the same two officers” to “the same sector every day with the potential for an additional two regularly-assigned cars depending on the sector’s crime rates.” These policies appear to echo Japanese designs in seeking a deeper integration between police and community networks. See Mayor de Blasio, Commissioner Bratton Unveil New Groundbreaking Neighborhood Policing Vision, N.Y.P.D., https://www1.nyc.gov/office-of-the-mayor/news/440-15/mayor-de-blasio-commissioner-bratton-new-groundbreaking-neighborhood-policing-vision#0 [https://perma.cc/W9RX-8MKG].

and the areal-disjunctive effects of geographically-consolidated inequality. The Japanese cities analyzed in this study present community-focused safety services equitably and ubiquitously engrained in their neighborhood infrastructural network, and remain largely unburdened by the complex socioeconomic and geodemographic inequities present in their U.S. counterparts. And it is amidst the neighborhoods most affected by New York’s comparatively aggressive wealth disparity that murders accumulate, and so do the tragic stories that they bring with them.217

Without the intent to extrapolate conclusions regarding the dynamics of socioeconomic factors, comparative wealth, and their interactions with police murder-prevention activity, this Paper poses the following premise in order to anticipate and preclude murder as the act of an individual, as well as murder as a social doing. Given the recurring nature of unemployment, relative poverty, and geodemographically-segregated wealth inequality as correlative indicators of higher murder rates in the U.S., and how the lessened intensity and geographical concentration of these elements in Japan appear to signal macro and micro-level reductions in murder rates, it could be projected that access to labor, which provides individuals with steady sources of income and with social affiliations that disconnect violence (and its consequent murder) from capital acquisition, its consequence in wealth attainment through lawful means, and its effects on factual and perceived geographically-based wealth disparity, may be useful avenues through which to approach murder prevention targeted at the individual commission of the crime. Alongside these subject-focused murder prevention strategies, community-focused safety services’ ubiquity and integrated neighborhood geographical presence, may act as an aggregate socially preventive layer.218

As a consequence to the data gathered in this comparative study, it appears that individuals with the structural capability to access a stable source of legally-sanctioned income may be less likely to participate in murder compared to those who exist within a system with more geographically-determined inequality and non-integrated wealth distribution patterns. In combination with an equal and integrated distribution of safety-related services these

217 Criminal conglomeration has effects beyond those that are statistical, and it seeps into more complex social-conditioning networks.

218 The nexus between community policing and the potential implementation of a Japanese-style koban model will be addressed further in Section 4.
policies seem conducive to more efficient murder-prevention strategies, less concentrated murder patterns, lower rates of recidivism, and lower murder rates overall.

4. CONCLUSIONS, POLICE ANALYSIS, AND RECOMMENDATIONS

The Road to Reducing Murder Rates: Socioeconomic Integration and Geographical Redistribution of Safety and Conflict-Resolution Resources

In analyzing Boston’s murder patterns, the high-crime micro-unit (or “hot spot”) theory infers from them that (i) murders are and will be substantially and fundamentally geographically concentrated, and (ii) that murders will be committed by a small recurring number of individuals. The hot spot thesis may have profoundly useful applications in projecting and anticipating murders in Boston; however, its potential for extrapolation to other cities’ states of murder seems to be rather limited due to two main hindrances that arise from its arguments. First, it is insufficiently explanatory; and second, as a result, it lacks inter-city and multicultural translatability.

The theory’s lack of explanatory value can be found both at a geographical level as well as in relation to perpetrator concentration. The hot spot thesis does not provide insight as to why extreme murder concentration takes place in Boston, or why a concentric and reiterative group of people perpetrates the vast majority of the murders. This renders the micro-unit premise a potentially useful reactionary tool to respond to projected iterations of crime, but fails to address the underlying causality of the crime itself, making its applicability in divergent sociocultural or geodemographic contexts


https://scholarship.law.upenn.edu/jil/vol41/iss3/5
inefficient. A comparative analysis between the conclusions derived from Boston’s state of murder, and those presented by the cities of New York, Osaka, and Tokyo reveals that the thesis cannot be directly expanded into each city’s murder context.

In both Boston and New York, crime in general, and murder in particular, tends to concentrate in areas disproportionately affected by inequality—areas which exhibit high rates of poverty and unemployment. Inequality in Boston and New York is heavily demarcated by neighborhood, and it is within the less socioeconomically privileged neighborhoods that murder tends to cluster and consolidate. Moderately varying from Boston’s hyper-localized state of murder, but ascribing to the same archetypal principles, the geographical location of intentional homicides in New York is heavily localized in specific neighborhoods within the Bronx and Southwest Brooklyn—those most markedly affected by socioeconomic disparity. Pertaining to the perpetrator prong of the theory, the commission of murder by cohesive and reiterative groups in Boston is comparatively higher than that of New York. While in Boston half the murders are committed by 1% of the city’s population, New York’s murder recidivism rates are below the regional average at 13%, which partially refutes the micro-unit thesis.

In New York, the precinct with the most amount of reported crime is the Manhattan South District, which includes Times Square (a commercial/touristic area), but these crimes tend to be property-related, given the commercial nature of the precinct. This same pattern is repeated in Osaka’s Chūō-ku, which includes Minami (an equally commercial/touristic area). This could signal an “overflow” effect by which crimes and murders that would be committed in Japan’s poorest neighborhoods are expelled to adjacent districts. However, the pervasive and equal nature of murders throughout the districts, the almost non-existent recidivism rates, and the lack of connection between murder and cohesive criminal group activity, seems to refute this potential hypothesis. See discussion supra Section 3.3.

However, this data point exclusively focuses on murder—whereas the micro-unit thesis, in its analysis of recidivist gun violence perpetrators in Boston, seems to have uncovered within Boston a trend that is much grander in scope. Gun violence comprehensively, at a national level, has significantly higher recidivism rates than other offenses, especially when compared to non-gun crimes. The United States Sentencing Commission found in a 2019 study that firearm offenders recidivate faster (with a median of 17 months for firearm offenders, compared to 22 months for non-firearm offenders) and at significantly higher rates than non-firearm offenders (68.1% for firearm offenders, compared to 46.3% for non-firearm offenders). Anthony J. Annucci, Return Rate for Parolees Committing New Felony

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An analysis of the state of murder in Tokyo and Osaka presents a near-antithetical narrative to that projected by the micro-unit model, and beyond the scope of what the theory seems to be able to directly accomplish. Delving into the specifics of murder and its interrelation with geographic and perpetrator factors, the story that unfolds in the selected Japanese cities is radically different than that encountered in the United States. Murders in Tokyo and Osaka are quantitatively lower and (i) are not concentrated in any particular neighborhood, being much more ubiquitously distributed throughout the geographic landscape of the selected cities, and (ii) are not committed by a converging, coordinated, or concentric group of perpetrators. First, pertaining to murder areal concentration, no one geographic nucleus absorbs a disproportionate amount of the murder cases in Osaka or Tokyo like Dorchester does in Boston or the Bronx does in New York. In fact, Nishinari, the Osaka neighborhood most affected by inequality, has a relatively low murder rate compared to other nearby districts, even when contrasted with the city’s wealthier wards. This pattern remains true for Tokyo’s state of murder. Much like the geographical element of the high-crime micro-unit thesis, the offender element prong has no possible application in Japan.  

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222 Regarding the purely firearm-related element of the analysis, it is worth noting that Japan and the United States exist in almost antithetical realms. In Japan, in 2017, there were 60 gun-related criminal incidents country-wide—with only 9 of them ending in fatality. In the U.S., that same year, there were almost 11,000 murders perpetrated with firearms, almost three quarters of the more than 15,000 total murder-count, and this is just a measure of murder by itself, not gun violence comprehensively. Focusing this particular analysis at a city level, and returning to New York and Tokyo, firearm presence exhibits the same traits as it does at each national level. In New York, there were 1,288 victims of shootings in 2018. In Tokyo, there were 0. One would have to go back to 2015 to find an incident of gun violence in Tokyo, and then would only encounter two reports of robbery at gunpoint. To find a gun-related murder, one would have to dig into 2014 data, a year in which 3 murders were perpetrated with guns in Tokyo (of the nationwide 4 total gun murders that year). Needless to say, with such low rates of general recidivism (and specific murder recidivism), in combination with the remarkably low national and regional gun violence and its consequent gun murder rates, the hot spots theory perpetrator prong is not directly applicable to the state of murder.

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https://scholarship.law.upenn.edu/jil/vol41/iss3/5
Recidivism rates in the Nippon nation are statistically insignificant, as only five cases from 1,768 murders measured presented recidivism (less than 0.3%).223 Furthermore, police in both Osaka and Tokyo tend to arrest different individuals for every murder case within their jurisdictions.224 In other words, in Japan almost every iteration of murder is adjudicated to a different individual, suggesting that murder in Osaka and Tokyo, unlike in Boston, is perpetrated by a varying and non-cohesive group of individuals.

In the selected U.S. cities, inequality appears heavily demarcated and conditioned by geodemographic factors, and subject to strict areal dissociation. In Osaka and Tokyo, inequality indexes, unemployment, and poverty are not disproportionately concentrated by geographical or neighborhood delineations. Inequality is much less pronounced in general in the selected Japanese cities than in their U.S. counterparts, and it does not observe rigid census tract demarcations. In examining the geographic and perpetrator concentration of murder in its relationship with socioeconomic disparity, the inter-city multicultural analysis reveals that in the selected U.S. cities inequality concentrates in specific locations, and so does murder congregate in coinciding geographical spaces and perpetrator conditions; whereas in Japan, where inequality (i) is not as pronounced, and (ii) is not as geographically determined, murders occur with much less frequency, without areal concentration throughout the city, and with the absence of concentric perpetrator groups. From the contrastive analysis of the state of murder and socioeconomic disparity in the selected U.S. and Japanese cities, it can be inferred that there is a relationship between geographically-demarcated

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223 See discussion supra Section 3.2.

224 In 2017, there were 99 murders in Tokyo and 98 different people arrested; and in Osaka 106 murders, with 103 different individuals arrested. See discussion supra Sections 3.2, 3.3.
inequality and murder concentration—both in terms of its location and its perpetrators.

The analytic component of this conclusion does not intend to claim that unemployment, poverty, or their derivative inequality necessarily produce higher murder rates. However, it does conclude that, in the United States, these factors—in combination—accompany and mirror them macro and micro-geographically. U.S. historical national murder rates are volatile, and their variability shares a correlative path that tends to emulate (or be emulated by) unemployment and poverty trends; while micro-geographically murders tend to accumulate in areas most negatively affected by inequality. In Japan, however, national trends in unemployment and poverty appear not to affect murder rates, which maintain a steady, continuous, and seemingly inexorable decline unaffected by cyclical socioeconomic changes—both at national and micro-locational analytic scope. The fact that no particular neighborhood seems to be specifically or disproportionately affected by inequality does not allow for conclusions on whether this socioeconomic indicator can be related to murder. However, the exceptions to the inequality rule, including Nishinari in Osaka and Districts 3 and 6 in Tokyo, suggest that, in the selected Japanese cities, socioeconomic indexes do not share a strict correlation with murder rates, even in the areas most affected by socioeconomic inequality. From the data gathered by this study, it can be inferred that lessened systemic

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225 Some scholars have established that this may be due to the fact that the motivation for murder in Japan tends to be mainly social status or pride (except for the anomalous and progressively disappearing cases of organized crime), which contrasts sharply with Braga et al.’s characterization of murder in the U.S., which they determine to be heavily related to gang activity. However, it is worth noting that Japan’s murder motivations are overwhelmingly based on status (constituting approximately 60% of murder motivations in contemporary times), business and money (approximately 15%), jealousy (approximately 10%), self-defense (3%). It is worth noting that in post-war Japan, the people most affected by inequality were still overrepresented in the commission of killings. Between 1955 and 1963, individuals classified as “very poor” constituted 6.25% of the general population, while committing 6.97% of the murders; individuals under the classification of “poor” constituted 25.9 of the population, while committing 61.3% of homicides; 40.1% of the population was classified as “moderate,” and committed 30.8% of the murders; 20.6% of the people were categorized as “affluent” and committed 0.88% of homicides; and “very affluent” individuals constituted 7.15% of the general population, while committing 0.03% of homicides. See Hiraiwa-Hasegawa, supra note 6, at 336, 338; Braga et al., supra note 2 (detailing the causes and purposes underlying murder in Boston and in Japan).
and geographically-determined socioeconomic disparity may be a contributing factor to lower murder rates.

In addition to the socioeconomic differences between the United States and Japan, there is an additional structural divergence that can be found between the nations' states of murder: the geographical allocation of police resources. This difference is predicated upon the geolocation of the police within the city infrastructure, and the social consequences in functionality that occur as a result. The difference between these two policy elements is at the heart of the proposals of this Paper: the potential implications for murder prevention of policies directed at (i) diminishing geographically-determined inequality through socioeconomic areal integration, and (ii) ubiquitous redistributive reallocation of police resources and other safety, conflict-resolution, and murder-preventive services, accompanied by a reconceptualization of their purpose.\textsuperscript{226}

Police presence is structurally different in the United States and Japan, as it is in the cities selected for this study. In Boston, there are 12 police stations. In New York, 133 precincts. In Osaka, there are 649 koban, and in Tokyo 1,183. The policy observation that this Paper puts forth is the following: one of the reasons Japanese police are so effective is their ubiquitous geographic location and insertion of the police into the social fabric of the communities they serve. This legitimizes the police force as a resource dedicated to community safety and conflict resolution rather than establishing itself as an external and intrusive force. The conceptualization of police forces is also different in both nations: Japanese police boxes are located every few blocks and are\textsuperscript{227} populated with three to five officers who are integrated members of the communities they serve. Not only does this seem to have high correlative values in what pertains to murder deterrence, but it seems that Japan falls almost by default into community-policing as a consequence of its inclusive police resource geospatial structure within the larger city.

\textsuperscript{226}The high-crime micro-unit hypothesis can be utilized as a lens through which to focalize the effective deployment of integration and conflict-resolution resource reallocation policies.

\textsuperscript{227}See discussion supra Sections 3.2, 3.3; "Koban" in New York City? CONSULATE GEN. JAPAN N.Y. (2016), https://www.ny.us.emb-japan.go.jp/japaninfo/spring2016/04.html [https://perma.cc/SI7W-36FW] (noting that as of 2016, there were approximately 6,300 koban, staffed by the aforementioned average of three to five officers throughout Japan; as well as approximately 6,600 residential police boxes, usually housing one officer and their family).
infrastructure. There are even police boxes spread throughout neighborhoods in which retired officers can gather to socialize and encourage community safety while being available for consultation, and some police stations double as homes where police officers will live with their families. 228 The Japanese koban model of structurally-integrated community policing seems able to produce positive consequences when compared to the United States’ police system in regard to murder prevention and resolution. Murder rates continue decreasing and are significantly lower in Japan (below 0.3, compared to the United States rates presently-stabilized 5); murder clearance rates are almost absolute (generally around 99% in Tokyo and Osaka, while in New York they oscillate between 60 and 75%, and in Boston, they don’t reach the 50% range);229 and incarceration rates are significantly lower (with the United States housing the world’s proportionally highest prison population with 655 prisoners per 100,000 individuals, while Japan presents a rate of 41).230

The question then remains, as a standing inquiry to this proposal: Why are the police in Japan so effective? Is it only because of geographical dispersion and ubiquity? There are several answers that could be utilized as counter-arguments to this thesis at a policy level beyond exclusively culturalist arguments: (i) Are there more police in Japan? (ii) Are Japanese police just better, when analyzed through objective elements like training, funding, or equipment? (iii) Are the police better paid in Japan? The answer to these three questions is no.

There are more police per capita in the United States than in Japan, a pattern that remains true in all of the cities analyzed in this study. In 2017, the total police force in the United States was 956,941, with 670,279 sworn officers. This is a rate of 339.4 officers per

228 See 2017 Tokyo Police Statistics, supra note 150.
230 This Paper does not analyze the relationship between effective policing and incarceration. However, it is worth noting that another crucial, structural difference between the United States’ and Japan’s law enforcement effects is their incarceration rates.
In Japan, the total police force amounts to 296,700 law enforcement employee for a ratio of 211.54 per 100,000 individuals—127.86 less per 100,000 or approximately 37% less total force than in the United States. And yet, murder prevention effectiveness abruptly varies from below 0.3 murders per 100,000 people in Japan to approximately 5 in the United States. The total law enforcement workforce in New York was 69,592—for a rate of 839.53 per 100,000 residents. In Tokyo, the total police force was comprised of 43,505, for a rate of 321.78—517.75 less per 100,000 residents, or approximately 62% less total force than New York. And yet murder rates in New York have stabilized in recent years in rates just below 4 murders per 100,000 city inhabitants, while Tokyo consistently averages below 0.7. In 2015, Boston had a total police force of 2,899, which gave the city a ratio of 435.77 officers per 100,000 residents. By comparison, the Osaka Prefecture had a total of 21,474 officers for 107.37 officers per 100,000 residents—328.4 less per 100,000 residents, or approximately 25% less total force than New York.

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236 Koban Index, Osaka Prefectural Police, supra note 104. See also Overview of Prefectural Police in 2018, Iwate Prefectural Police, http://www2.pref.iwate.jp/~hp0802/oshirase/keimu/kenkeiyouran/00mokuji.html [https://perma.cc/LZ4N-689Z]. Most of the police are gathered within Osaka city, though the numbers include the prefecture.
in Boston. Despite Boston having a higher number of police per capita than Osaka, it records over 7 murders per 100,000 individuals, contrasted by rates that stabilize around 0.5 in the Nippon city. In every possible geographical scope of the analyzed entities, there is a substantially larger police presence in the United States than there is in Japan. It is, therefore, safe to assert that police number per capita is generally higher in the United States as well as in the cities analyzed and that the quantity of police does not equate to efficiency in murder prevention since increasing the number of police officers does not necessarily reduce murder rates.

With respect to training and prerequisites to access the police profession, instruction and education preconditions are roughly equal in both countries.\footnote{Though training time does not equate to training quality, it is not the purpose of this Paper to evaluate the quality of police academy training; and in the pursuit of avoiding potential bias towards any particular police structure, trainings will be assumed to have the same quality.} Regarding funding and equipment, the Japanese police receive substantially less dedicated funding, and do not have the material resources available to U.S. law enforcement. New York Police Department training is six months,\footnote{\textit{Hiring Process: Requirements}, N.Y.P.D., https://www1.nyc.gov/site/nypd/careers/police-officers/po-hiring.page [https://perma.cc/5MA3-7SSL] (last visited Apr. 24, 2019).} Boston’s almost seven months,\footnote{\textit{How to Become a Police Officer}, C\_\textsc{ity} B\_\textsc{os.}, https://www.boston.gov/departments/police/how-become-police-officer [https://perma.cc/AAL3-RR3M] (last visited Apr. 24, 2019).} and Japan’s training takes a period of six months.\footnote{Japanese training periods are nationally mandated and regulated. \textit{Recruitment: Police, Nat’l Police Agency}, http://www.npa.go.jp/about/recruitment/police/school/faq.html [https://perma.cc/78HC-N6GF] (last visited Apr. 24, 2019).} The recruitment prerequisites are also comparable and include similar levels of essential prior education.\footnote{In New York, candidates “must have earned 60 college credits with a minimum 2.0 GPA from an accredited institution or 2 years of active military service in the United States Armed Forces in order to be appointed to the title of Police Officer.” In Boston, “[y]ou need to have a high school diploma or a GED certificate. You can also satisfy this requirement with three years of military service and an honorable discharge.” In Japan both university graduates and non-graduates can become police officers—university graduates will be trained for 6 months, and non-graduates will be trained for 10 months. See discussion and sources cited supra notes 236-240.} It is safe to conclude, therefore, that the quantitative elements of training as well as prior education requirements do not play a determinant
differential role in murder prevention. Pertaining to funding, in 2017 Japanese National Police received approximately $2.6 billion, and the 47 prefectural police forces received national appropriations of approximately $29.5 billion. That same year, the United States spent an estimated $115 billion on police, and New York City budgeted $5.6 billion for FY 2019—for a rate of $529 per N.Y.C. resident. The Tokyo Metropolitan Police Department appropriated 672,223,000,000 JPY (about $6.2 billion) in the initial budget of the Tokyo Metropolitan Government for Fiscal Year 2019—for a rate of $465 per capita (approximately 14% less than N.Y.C. per resident). In 2017, the Boston Police Department was allocated over $356 million of the city’s budget—or $528.80 per resident. The Osaka Prefectural Police Department appropriated 273,641,000,000 JPY (about $2.5 billion) in the initial budget of the Osaka Prefectural Government for FY 2019—for an approximate rate of $327.40 per capita (61.5% less than Boston per resident).


245 This is without taking into account incidentals like overtime, which can amount to $60 million a year. Other Departments like Youth Engagement & Employment or the Office of Arts & Culture received $6,058,544 and $1,349,436, respectively. City of Boston, Summary Budget (2017), https://www.cityofboston.gov/images_documents/02%20Summary%20Budget_tcm3-53283.pdf [https://perma.cc/PV6N-RJNF]; Walsh Declares Racism Public Health Crisis, Wants 20% of Boston Police OT Budget Reallocated, CBS Boston (June 12, 2020), https://boston.cbslocal.com/2020/06/12/boston-police-budget-mayor-marty-walsh/.

terms of equipment, the militarization of the police in the United States has given it some of the most sophisticated and powerful tools available for law enforcement and urban warfare, though murder rate prevention results from a comparative perspective with Japan do not seem to accompany or reflect the expenditure. Militarization of the police is a phenomenon present in the United States, but absent in Japan, and which does not seem to contribute positively to murder prevention.247

Finally, payment and remuneration of officers does not have a necessary tie to the quality of law enforcement, though it is a question worth exploring. Salaries of officers in both countries are complex to compare due to adjusted cost of living, variability between lower and higher rank remuneration, and the potentially diverging sociocultural conceptualization of money and its value. However, by the numbers alone, Japanese police officers seem to get

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paid a comparatively lesser amount than law enforcement in the United States.  

With significantly less total force numbers, equal quantitative amounts of training and formal education prerequisites, less overall budget, less militarized equipment, and seemingly more limited pay structures, murder rates in Japan remain lower than those in the United States. Without any other inferences and subject to other socioeconomic and legal conditions, these facts appear to indicate higher efficiency in Japan’s murder-prevention strategies. The key measurable difference between both nations’ police structures appears to be their geographical presence. The solution to the United States murder problem could lie not in increasing the resources given to the police, but in geographically reorganizing the police more effectively to establish police presence as an integrated element of the communities they serve. In doing so, there is an underlying social functionality that may reconceptualize the police’s purpose—preventing crime and building the social and infrastructural fabric of community-policing. This is not a thesis


249 There are, among other disparities, infrastructural barriers to an unaltered implementation of the koban model in the United States. The main infrastructural criticism would be that the United States tends to be less densely populated than
that calls for a necessary increase in resources dedicated to police efforts, but instead calls for a more efficient allocation of them.

The modern iteration of the koban system appeared in 1874, coinciding with the creation of the Metropolitan Police Department as a manner in which to increase police presence at a micro-locational level. Despite their prolonged history, these structural components of Japan’s police governance have been able to adapt their community purpose to the passing of the times, and appear to have carried significant efficiency momentum in crime and murder.

Japan, and that the success of the Japanese koban model would only function in densely-populated areas. However, there is reason to believe the model is effective outside densely-populated areas. The koban system is deployed throughout Japan with equal (or more) success than in Osaka and Tokyo; two cities that account for most of the population and murders in Japan. This seems to indicate that the success of the koban model is not reliant on, or at least does not exclusively attend to, affectations related to population density. Furthermore, this Paper does not endorse a direct transplant of the model without modification, but encourages a tailored adaptation accounting for divergences between the two nations. General population density inside U.S. cities (about 1,600 p.mi²) is significantly greater than that of unincorporated areas (about 35 p.mi²); compared with the average Japanese average population density of almost 900 p.mi². Though perhaps not expandable to the entirety of the United States, or even to every section of every city, infrastructural and resource distribution conclusions found in this contrastive study are a useful framework from which to comprehend true community-policing, and a preventive (and not punitive) approach to murder.


prevention. The koban superstructure is projected to maintain an idea of permanence, integration, and trust between the community and the officers who serve them, and reinforces the legitimacy of the police and police activity within neighborhoods. The Japanese National Police Agency goes as far as to name the koban “the center of community policing,” grounded on the concepts of cooperative crime prevention and deterrence. Its overarching purpose is to go beyond crime reactiveness and pursue prevention through integrative community-building and relationship-building. As such, police interactions include, for example, conducting jyunkeirenraku, which are routine visits to residences and businesses, to listen to residents’ concerns, and take potential suggestions from community members with the intent of creating community cohesion founded on relationships of identity and trust. While under United States notions of police-relations these interactions with the citizenry may seem an intrusion on individual freedoms, Japan perceives this social intertwining as an advancement of community relations beneficial to both agents. For the police, as service-providers of safety, it is a dynamic through which to


252 Id. (noting that police sponsor community outreach activities, among other actions).

253 Though a connotation of the police ubiquity proposal put forth in this Paper may be that it is limiting individual freedoms, most freedom ranking organizations recognize that Japan guarantees very similar human and interactive freedoms for its citizens as the United States does. Freedom House in its 2020 review, gave Japan a total freedom score of 96 (with a disaggregated score of 40 in political rights and 56 in civil liberties), whereas the United States received a score of 86 (scoring 33 in political rights, and 53 in civil liberties). According to this D.C.-based ranking, the United States is therefore 11.63% less free than Japan. All in all, it seems that the existence of (i) integrative socioeconomic policies and (ii) conflict-resolution resource ubiquity policies in Japan does not imply in any way a reduction in freedoms or pursuable liberties as a consequence to its legal frameworks. See Countries and Territories, FREEDOM HOUSE, https://freedom house.org/countries/freedom-world/scores [https://perma.cc/9M8J-YNCW] (last visited June 15, 2020); SARAH REPucci, FREEDOM HOUSE, FREEDOM IN THE WORLD 2020: A LEADERLESS STRUGGLE FOR DEMOCRACY (2020), https://freedomhouse.org/sites/default/files/2020-02/FIW_2020_REPORT_BOOKLET_Final.pdf [https://perma.cc/G43K-EM2N]. See generally IAN VASQUEZ & TANJA PORČNIK, CATO INST., THE HUMAN FREEDOM INDEX 2019 (2019) (giving the United States a “personal freedoms” score of 8.72 (compared to Japan’s 8.70) and a “safety from homicide” score of 7.9 (2 full points below Japan’s 9.9)); “Koban” in New York City?, CONSULATE GEN. JAPAN N.Y. (2016), https://www.ny.us.emb-japan.go.jp/japaninfo/spring2016/04.html [https://perma.cc/S17W-36FW].
promote community cohesion; and to individual members of the community, as end-users of said safety, it is a channel through which to see their interests addressed and guaranteed.

As a result of this careful policy design, police officers are expected to become active and recognizable community members with deep ties connecting them to those they provide services to. It appears that the underlying intent of the koban system is that of dispelling the conceptualization of the police force as an extraneous and foreign imposition of conflict-resolution and reverting it to deliver a user-centered service. Despite recent local efforts in the United States to build community-policing structures, exemplified by New York’s “build the block” or “neighborhood policing” initiatives, there is still the fracturing element of infrastructural distribution of police resources standing between both nations’ strategies for murder prevention. This fracture impedes U.S. police networks from integrating into neighborhoods in the manner that the koban system allows for. It is worth noting, for the purposes of policy translatability, that since Singapore shifted its policing strategy from an incident-centered reactive system like the one currently present in the United States, to a police governance structure modelled after the koban, homicide rates have consistently declined on the island from around 2.5 per 100,000 individuals, to the current rate of 0.21.

Another key differential element between the United States and Japan, which may be tied to the integration of police into the communities they serve, is that of killings perpetrated by the police within the exercise of police powers. Though state killings fall beyond the scope of this Paper, it is worthwhile to briefly address the potential link between community policing, the concept of legitimate policing, and police killings. One of the key foundational principles that underlies the purpose and legitimacy of the police is that of maintaining peace, order, and security through the enforcement of law, which includes the prevention of killings. But in some instances, the use of force on behalf of the state under the pretext of maintaining said peace concludes in the commission of a

killing by police officers in the line of duty. In the United States, police killings generally amount to approximately 1,000 per year. In Japan, police killings are near non-existent. Official criminal statistics published by the National Police Agency report on murders committed by all public servants of national, prefectural, and local governments and administrations. These include all individuals involved in all local and national legislative, judiciary, and executive bodies, including prefectural and national police departments. Whereas in 2018, the United States saw approximately 1,000 police killings, in Japan there were a total of 7 killings committed by all public servants. In 2015 Japan saw 4 killings perpetrated by public servants and 3 killings in 2016 and 2017; these patterns hold steady throughout the last decade. Consultations with sources from the Japanese N.P.A. and the Ministry of Justice revealed that these public institutions do not publish the specific statistics of the number of murders by public servants broken down by administrative body or agency. This prevents the public from knowing exactly the number of murders carried out by police officers from the government-provided statistics. This information is instead inferred from private publications.


257 Police killings have occurred in 1978, 1983, 1989, 2000, 2007, 2014 (one case per year), and 2015, 2018 (two cases). See 19-yr-old Police Officer Shoots Colleague...
killings, those committed by the police in their acts of service tend to be zero, and are an extraordinarily rare occurrence rather than a norm. Since 1978, there have only been ten total reported cases of killings ascribed to incumbent police officers and the majority of them appear to not have been in the line of duty. Far from idealizing a direct translation of the koban system to the United States, what seems undeniable is that the United States’ police structure, which may have been useful as a policy answer to a different time in which law enforcement needed congregate militarized structures for the administration of “law and order,” now seems to have exhausted its applicability under the same patterns and poses a set of challenges both for citizen and officer. The koban integrated model appears to suggest that if police resources are deployed more precisely and equitably, they can function more efficiently as a murder-inhibiting agent. It can be derived from this comparative analysis that the potential of the police as a force for murder prevention and community-building can be more effectively utilized if conflict-resolution dynamics are designed to be integrated within our communities like they are in Japan by way of the koban system. It may be complex for citizens to ascribe legitimacy to a militarized police force constituted by individuals that do not belong to the community they serve just as it may be complex for the police officers to maintain order and justice. This Paper does not intend to suggest that a koban-style approach to geographical allocation of police resources would imply an amelioration of this critical situation in the United States. However, it is worth noting that Japan, a country which pursues permanent police presence by way of the koban model has significantly less state killings than the United States, where (i) the

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258 See generally sources cited supra notes 256, 257.

259 As previously stated, the indicator of police killings may be closely tied to the effects of community policing on police forces and the neighborhoods they pursue their state functions in. However, this Paper is deferential with the determinism of this connection, and does not make absolute claims regarding its certainty, as it recognizes that it may be linked to other complex, overlapping, and nuanced sociocultural and socioeconomic factors, bases, and inferences.
geo-allocation of police resources may create a dislodging rift between law enforcement and the citizens they serve, and (ii) where socioeconomic divides amongst neighborhoods are more pronounced. Perhaps, as a consequence to a koban-style mode of policing, people would cease to see a division between the police and the community and see law enforcement as members of the community providing the service of safety as they do in Japan.

This Paper does not call for a direct emulation of the koban system, regardless of whether this is a model that has had objectively positive results in Japan. This Paper instead proposes that it is the underlying principles of the koban system that make for an efficient crime prevention strategy in general, and a targeted murder prevention strategy specifically. This latent essence is found in the integration and identity between social and legal norms necessary for maintaining stability and peace across communities, and those individuals who provide the service of their enforcement. In subscribing to the nature of these systems, this Paper proposes the pursuit of a redistribution of the conceptualization of law enforcement power dynamics and criminal retribution. It proposes a reimagining of social conflict resolution at a micro-level that reconstructs systems of post-criminal punitive action, replacing them with systems of preventive, community-centered, and integrated justice distribution. Perhaps this may take the form of a koban system adopted in Japan, where police officers are active, integrated, and identifiable actors within their community. Or perhaps it may take the form of local social councils directed at restorative justice rather than punitive retribution, as an aprioristic measure to the involvement of the traditional justice system; paired with a tightening of the reins of accountability regarding abuses of authority, and a reconceptualization of social services as murder prevention strategies. Or perhaps it is a combination of all these policies or their interlacing with other systemic alternatives—always anchored to become an effective and culturally-adapted conversion of a redistribution and reconstruction of power nuclei between the police and the citizenry. In essence, the system to cure the present inefficiencies of U.S. police dynamics may be inspired by the principles of redistribution of justice administration and peace-keeping resources to ensure non-arbitrary and non-violent results and allow communities to feel like the order system is established for and by its citizens, integrated within their communities, and not an application of extraneous foreign force which may carry with it
the implied risk of ending in death. This is fundamentally what the koban system provides to the Japanese society: an equal and disperse distribution of community-focused resources which concludes in the social integration of the administration of justice and order, and the provision of safety as a community resource. The koban system, as other analogous community-focused and integrated peace-keeping systems do, allows for social conflict resolution to occur prior to the criminal conduct through the creation of tight-knit and cohesive social structures interwoven with their safety-enforcement systems. This may be a fundamental pillar of the Japanese success at criminal deterrence and an integral component to its comparative efficiency at preventing murder.

This Paper does not intend to establish the claim that community policing would cure all the inefficiencies and complexities endemic to the U.S. police system. Nonetheless, it is a path forward, and a positive start to a conversation that regards safety as a community service. Reformulating murder as a public goods issue pushes us to understand communities as consumers of safety and the police as due providers of said safety. Integrated relations would benefit community members as the “end-user” of safety, as well as those who are to provide and distribute the public service. As consumers and financiers of the safety public good, communities have the right to redesign and redefine the nature of the product provided to them. As far as taxpayers invest in peace-keeping services for the purpose of social safety as the foundational legitimating principle of the police force, this includes the reasonable prevention of killings. Taxpayers thus deserve that their contributions to capitalizing the police are transparent and that the peace services provided are as efficient, accountable in their execution, and consumer-focused as they can be. In Japan this is achieved with less human capital and less dedicated monetary resources, resulting in less murders by way of the koban system. Japan has almost 40% less law enforcement employees per capita than the United States, their murder clearance rates are higher by an almost 40% differential (and near-absolute), and murder rates in the Nippon nation are 26.5 times smaller. These facts perhaps dispel the notion that more capital investment and more police necessarily equate more safety from murder. This information also pushes us to look deeper into the foundational principles of our police forces as well as the socioeconomic causality of homicide, and question how to formulate systems that may more efficiently prevent murder.
Japan has uncovered a competitive advantage over other nations in murder prevention and resolution. Though the underlying causes for the country’s success at almost eradicating murder may be deeply rooted in culturally-charged values, those are complex to model and transplant to other nations. Cultural deontology cannot easily be observed, removed, and adapted from one society to another. However, it is possible to emulate techniques of success and, in that regard, follow in the footsteps of Japan’s address of murder as a social issue. This Paper does not propose a direct and universal transplant of Japan’s policies into the United States. Instead it acknowledges that there are lessons to be learned in the principles that inform and inspire them. This Paper proposes an adaptation of the notions derived from Japan’s success in murder prevention, and encourages the pursuit of reform in United States regulatory framework attending to U.S.’ capacities and necessities, without sacrificing fundamental American freedoms and liberties.\textsuperscript{260} This could be achieved in the United States by (i) enacting policies that seek to reduce and disassociate socioeconomic inequality from strict geospatial demarcations, and (ii) reallocating police and other safety and conflict-resolution resources to make them universally available, socially integrated, and community-focused in the style of the koban.

\textsuperscript{260} See discussion supra note 253.