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Jason T. Carmichael and Stephanie L. Kent

Abstract

Substantial theoretical and empirical attention has been directed at isolating the structural conditions that lead to shifts in the size of metropolitan police departments in the United States. These studies rely heavily on ethnic and racial threat explanations, which imply that larger police forces will be employed in jurisdictions with larger minority populations. It is entirely unclear, though, whether such accounts are applicable outside the United States. This study fills this void in the literature by assessing the extent to which ethnic threat hypotheses can explain variations in police strength using data on 40 large Canadian cities from 1996 to 2006. Results show that the size of the minority population significantly influences the size of metropolitan police departments.

Introduction

Over the past several decades, the Canadian population has seen a dramatic expansion in immigration that has, in many ways, changed the face of the country. Recent migrants have been much more ethnically and culturally diverse than previous waves of immigrants. Census data show, for example, that in 1960, only 3.2% of the Canadian population had family ancestry originating from a country outside Europe or the United States (Statistics Canada, 1961), whereas today that number

is 20% (Statistics Canada, 2011). In fact, 2 of every 10 people living in Canada today were born outside the country, the highest proportion among the G8 countries and the fifth highest in the world, with most coming from Asia (including the Middle East), Africa, and Latin America (Statistics Canada, 2011; World Migration Report, 2010). While conventional perceptions of Canada suggest widespread tolerance and even the celebration of such sizable and rapid shifts in the ethnic makeup of the society, evidence from social science research is beginning to seriously challenge this assumption. Despite constitutional guarantees against discrimination based on race, national or ethnic origin, color, religion, and many other categories, disparities in a variety of important socioeconomic indicators exist between majority group members and ethnic minorities in Canada. Substantial evidence shows, for example, that visible minorities face discrimination in the labor market (e.g., Hou & Coulombe, 2010; Pendakur & Pendakur, 2011; Skuterud, 2010), disparities in health outcomes including a greater likelihood of chronic health conditions and increased rates of depression (Ali, McDermott, & Gravel, 2004; Perez, 2002), in housing (Hogan & Berry, 2011). Together, these studies reflect the growing evidence that ethnic minorities experience a number of consequential forms of discrimination in Canada.

A relatively small body of literature has also explored the extent to which discriminatory practices against ethnic minorities may have been introduced into the Canadian criminal justice system (see Wortley, 2003 for elaboration). The primary cause of such limited scholarship is what effectively amounts to a ban on the collection and/or release of race-specific crime or justice statistics (for elaboration, see Millar & Owusu-Bempah, 2011; Wortley, 1999, 2003). Despite this limitation, research suggests that ethnic minorities face discrimination at multiple points in the criminal justice system from involvement with police, to bail, and sentencing. Studies have shown that members of some ethnic minority groups (particularly Aboriginals and Blacks) are much more likely to be stopped and searched by the police than majority group members even after accounting for criminal involvement and other risk factors (Fitzgerald & Carrington, 2011; Wortley & Owusu-Bempah, 2011; Wortley & Tanner, 2003). This heightened police attention of ethnic minorities has contributed to their disproportionate involvement at higher levels of the criminal justice chain. Evidence shows, for instance, that minority group members in Canada have higher arrest rates (Wortley, 1999), and research suggests that they are overrepresented in incidents in which police use lethal and nonlethal forces (Pedicelli, 1998). When visible minorities face the courts, they appear to receive similar treatment. Empirical studies have shown that ethnic minorities are more likely to be denied bail (Kellough & Wortley, 2002; Roberts & Doob, 1997) and have a greater chance of being sentenced to prison (Roberts & Doob, 1997) even after relevant factors including the seriousness of the offense and prior criminal involvement have been taken into account. Given such evidence, it is not surprising that survey research has consistently shown that ethnic minorities in Canada view the criminal justice system much more negatively than the majority group members (e.g., Bowling & Phillips, 2002; Cao, 2011; Wortley, 1999).

Yet, despite such attention to ethnic discrimination in the Canadian criminal justice system at the individual level, few studies have attempted to ascertain whether or not communities, in the aggregate, are responding to fears about rising ethnic minority presence by strengthening criminal justice apparatuses. In particular, no study in Canada has examined whether the presence of a large minority population contributes to the size of metropolitan police departments across the country. The lack of scholarly input on this topic should be rectified for two important reasons. First, the evidence outlined previously suggests that minorities living in communities with greater police presence will be subjected to greater surveillance and subsequent criminal justice involvement. Thus, aggregate expansion in law enforcement in jurisdictions with more minorities may be the source of minority group overrepresentation in the criminal justice system.

Second, while conventional explanations for changes in the size of local police departments point to rational assessments of factors such as crime rates, population, or budgetary shifts, a rather sizable

body of literature conducted in the United States has attributed shifts in police strength to the size of the minority population in a jurisdiction (e.g., Carmichael & Kent, 2014; Kent & Carmichael, 2014; Kent & Jacobs, 2005; Stucky, 2005). These studies typically point to social threat hypotheses, which suggest that majority group members will use their control over political and economic resources to ensure that the creation and enforcement of the law will maintain the social arrangements that benefit them (e.g., Collins, 1975; Lenski, 1966; Quinney, 1974). The theory assumes that without a substantial threat of punishment, minority group members may use violence to redistribute societal resources more equitably (Blau & Blau, 1982). It is entirely unclear whether or not these threat hypotheses can be applied to the Canadian context. The primary goal of this study will be to resolve this question. Specifically, we ask, "Does the presence of ethnic minorities and/or immigrants lead to an increase in the size of metropolitan police departments across Canada?" To answer this question, we use a fixed-effects estimation approach that will allow us to isolate the influence that the size of the minority and immigrant populations may have on the per capita number of police officers in large Canadian cities in 1996, 2001, and 2006, after statistically controlling for a variety of other factors. Before detailing our theoretical expectations, we first provide a brief account of the ethnic minority groups in Canada as well as recent trends in immigration.

A Brief Overview of Race, Ethnicity, and Immigration in Canada

Unlike the United States, where public and scholarly discourse on race and ethnicity typically centers on the dichotomies of Blacks and non-Blacks or Hispanic and non-Hispanics, concerns over ethnicity in Canada tend to involve discussions about three distinct categories of people, namely, Aboriginals and non-Aboriginals, French and English speaking people, and between the original European settlers of Canada and the more recent immigrants (see Roberts & Doob, 1997 for elaboration). As is often the case in other societies, the story of "race" is convoluted and has evolved substantially through the country's history. At points in history, the French and English have been referred to as being different races. Today both the French and English are categorized as "White" and are recognized as the original colonizing groups of Canada with all newcomers—particularly those from non-European origins—seen as "immigrants." Finally, the indigenous peoples of Canada are known as Aboriginals and are comprised of the First Nations, Inuit, and Metis. Despite substantial diversity, these groups have frequently been lumped together as a single race. Aboriginals have faced a substantial amount of discrimination. In particular, it has been well documented that Aboriginals are vastly overrepresented in the criminal justice system (Wortley, 1999).

In the early 1980s, the Canadian government attempted to create a legal definition that could be used to identify ethnic and racial minorities in the country. By the mid-1990s, the term "visible minority" became enshrined into law in the Employment Equity Act. The Act defined a visible minority as "persons, other than Aboriginal peoples, who are non-Caucasian in race or non-White in color" (Statistics Canada, 2001, p. 2). Groups included in this broad definition were viewed as "visibly non-White": Blacks, Chinese, Filipinos, Japanese, Koreans, Latin Americans, Pacific Islanders, South Asians, and West Asians/Arabs. The visible minority category includes vastly different groups that may face substantially different experiences in Canada. Yet, as outlined earlier, a substantial body of literature has linked visible minority status to a variety of discriminatory practices including racial profiling by police (Commission on Systemic Racism, 1995; Fitzgerald & Carrington, 2011; Wortley & Tanner, 2003) and more severe sanctions from courts (Roberts & Doob, 1997). Visible minority status is strongly related to immigration. Statistics Canada reports that almost 7 of 10 visible minorities (68%) are recent immigrants to the country and, as previously discussed, their country of origin has shifted away from Europe (over 80% of immigrants to Canada in the 1950s were from Europe) to migrants from Asia (54% of immigrants to Canada in 1996) and recently from Africa and Latin America (Statistics Canada, 2011).

Finally, it should be noted that visible minorities and immigrants are not normally distributed across Canada. The vast majority are highly concentrated into Canada's urban areas with over 95% of visible minorities living in urban areas (Statistics Canada, 2001). Furthermore, the 2011 census shows that certain cities are much more likely to have a sizable minority population, particularly those in the provinces of British Columbia and Ontario. In fact, visible minorities make up roughly half of the population in two of the country's largest cities with Vancouver at roughly 51% visible minority and Toronto just under 50% (Statistics Canada, 2011). Similarly, Aboriginal groups living off reservation are concentrated in urban areas in the Prairie provinces of Saskatchewan and Manitoba. If ethnic threat theories are relevant in the Canadian context, Canadian cities with the largest minority presence should have the largest metropolitan police departments. Before examining the methodology and findings of our study, we will elaborate more fully on our theoretical accounts.

Theory on Police Strength

Racial and Ethnic Threat

As briefly outlined earlier, the extant literature on the size of metropolitan police departments in the United States has identified a strong, positive association between the size of the minority population in a city and police force strength in that city (e.g., Carmichael & Kent, 2014; Greenberg & West, 2001; Holmes, Smith, Freng, & Munoz, 2008; Jacobs & Carmichael, 2001; Kent & Carmichael, 2014; Kent & Jacobs, 2005; Liska, Lawrence, & Benson, 1981; Sever, 2001; Stucky, 2005). Many of these scholars interpret these findings using the racial threat perspective, drawing from the foundational work of Hubert Blalock (1967) who argued that majority group members increase efforts to maintain their social and political dominance as the size of the minority group grows. These efforts to maintain dominance appear to include the manipulation of the criminal justice apparatus that, presumably, targets its efforts disproportionately toward minority groups. Studies examining police expenditures and police strength have offered rather consistent support for such claims. Early work by David Jacobs (1979), for instance, identified a significant and positive relationship between the size of the African American population and police strength across 121 large U.S. metropolitan areas. Liska, Lawrence, and Benson (1981) also tested this perspective using data on police force size in 109 U.S. jurisdictions and found that the size of the minority population (operationalized as the percentage of non-White) was positively related to the outcome. Similarly, Pamela Jackson and Leo Carroll (1981) examined per capita expenditures in 90 cities across the United States and found that the size of the Black population was positive and significant after controlling for a number of other factors.

Over the last several decades, dozens of studies have come to similar conclusions about the relationship between minority size and social control efforts. In fact, a review of over 28 studies of police strength in the United States found that only 5% failed to find statistical support for the racial threat perspective (Sever, 2001). Fewer studies of police strength have examined the applicability of an ethnic version of threat theory, that is, whether minority groups other than African Americans have a similar effect on social control apparatuses. Research testing the ethnic version of threat theory in the U.S. context found that jurisdictions with more Hispanics have larger police departments (e.g., Kent & Jacobs, 2005) or had higher levels of expenditures on policing (Holmes et al., 2008). It appears, then, that threat theory is not limited to reactions to the size of the African American community.

Beyond the empirical support for racial and ethnic threat theories in police strength research conducted in the United States, a great deal of scholarly evidence has linked the size of the minority population to changes in other aspects of the criminal justice system including money spent on police (Nalla, Lynch, & Leiber, 1997) corrections (Jacobs & Helms, 1999), jail admissions

(Carmichael, 2005), imprisonment rates (Jacobs & Carmichael, 2001), sentence severity (Carmichael, 2010; Carmichael & Burgos, 2012; Chiricos & Crawford, 1995), and the number of death sentences across U.S. states (Jacobs & Carmichael, 2004).

But why would the criminal justice system respond to shifts in the minority population? Conflict theorists have long claimed that such a reaction exists because dominant group members view such groups as threatening to the established order (Turk, 1969; Quinney, 1977). According to this line of reasoning, subordinate groups that are culturally dissimilar from the dominant group members (e.g., racial and ethnic minorities and/or immigrants) are believed to pose a fundamental threat both because these groups are seen as a criminal threat that may destabilize the social order and also because they may compete for scarce economic resources as well as political power within society (see Blalock, 1967; Blumer, 1958; Markert, 2010 for a more contemporary account). To reduce this type of competition and maintain their favorable social position, conflict theorists argue that dominant group members will manipulate both the formation of laws and the enforcement of those laws. Adherents to this perspective assume that control over the legal order by majority group members is possible because the uneven distribution of political and economic resources that favor privileged groups gives them disproportionate influence over the construction and implementation of social policies in ways that reflect their interests. As a result, the law will reflect the position of dominant group members who use the legal system to criminalize the activities of subordinate groups.

According to threat theorists, negative attitudes and discrimination against ethnic minorities derive primarily from feelings that dominant ethnic groups *deserve* a superordinate position within society that entitles them to disproportionate share of societal resources, rights, and privileges and any attempt (perceived or otherwise) by minority groups to redistribute those resources is strongly contested (for elaboration, see Bobo, 1999). Thus, perceived competition for resources motivates strategies to remove such competition. These strategies can include a wide range of discriminatory policies and practices that not only includes practices leading to, for example, employment discrimination and housing discrimination but also more repressive crime control measures that are, as outlined earlier, much more likely to target ethnic minorities (Blalock, 1967; Bobo & Hutchings, 1996).

This situation is apparent in Canada because recent immigrants, Aboriginals, and visible minorities are increasingly viewed as criminogenic and a threat to traditional Canadian society (see Gordon, 2006) and these groups are subject to considerable discrimination not only in the criminal justice system (Wortley, 2003) but also in other aspects of society including the labor and housing markets (e.g., Hou & Coulombe, 2010). In fact, government statistics show that visible minorities in Canada face higher unemployment rates and lower earnings when they are employed than majority group members. It is interesting, but perhaps not surprising, given that the public and politicians have a distorted view of crime statistics (Beckett, 1997) that immigrants continue to face discrimination in the criminal justice system; and in other social arenas, despite a large body of recent criminological research that finds that immigrant communities often have lower rates of crime (e.g., Lee & Martinez, 2009).

Unfortunately, no study has assessed whether or not threat hypotheses are applicable in Canada. We will fill this gap in the literature by applying the theoretical expectations derived from the threat hypothesis to the Canadian context. If threat theories are applicable in Canada, *we would expect to see larger police departments in cities with more ethnic minorities.* To test this hypothesis, we will separately examine the influence of three groups, namely, immigrants, "visible minorities," and Aboriginal peoples.

Economic Threat

Another version of the threat hypothesis stresses that the threat of a large economic underclass creates unstable social conditions that must be maintained by the threat of sanctions. Seminal work

by neo-Marxists Rusche and Kirchheimer (1939) provides the foundation for this line of reasoning. They, as well as more contemporary theorists, argue that punishment should not be seen as simply a means to control crime but rather as one of the primary tools used by majority group members to control the "labor surplus" population or the poor (Garland, 1990; Jankovic, 1977; Piven & Cloward, 1979; Quinney, 1974). It is presumed that when economic conditions are poor, punishment will be used as a mechanism to absorb some of the unemployed population, typically by placing them in prisons. Adherents suggest that the unemployed underclass face greater risk of criminal justice intervention because they are less committed to the law and so the threat of force is all that stops them from committing crime that threatens the social order. Jankovic (1977) elaborates on this point by suggesting that "a rise in unemployment will lead to an increase in prison commitments because the policy of deterrence dictates an intensification of punishment to combat the increasing temptation to commit crime" (p. 20). This line of reasoning further suggests that when the labor market improves and demands for labor increases, criminal justice officials may be less inclined to round up large numbers of the unemployed because their labor is needed by employers. Thus, during times of economic expansion, formal social control efforts may be loosened.

A great deal of scholarly research has attempted to assess the empirical strength of a link between high levels of unemployment and levels of formal social control (c.f. Chiricos & Delone, 1992; Sutton, 2000). While a meta-analysis has shown that a slim majority of criminal justice studies has provided support for this view, recent studies on police strength in the United States have produced mixed findings with some finding a positive effect of unemployment (Kent & Jacobs, 2005), others finding no effect (Carmichael & Kent, 2014; McCarty, Ren, & Jihong, 2012), and one finding a negative effect (Zhao, Ren, & Lovrich, 2012). No study has assessed whether or not this neo-Marxist theory has any relevance in the Canadian context. If it is consistent, we would expect that *cities with high unemployment may have larger police forces as a means to control the labor surplus population.*

Alternative Accounts and Other Controls

The level of criminal activity. Rather than a reaction to the threat of minorities or an economic underclass, consensus theory assumes the criminal justice system is simply a mechanism to control and punish those who violate the law. As such, this model suggests that shifts in the strength of the criminal justice system merely reflect the magnitude of infractions against the legal order. The most widely used measure of such infractions in the scholarly literature has been crime rates. If this hypothesis is accurate than fluctuations in crime should lead to systematic variation in the level of social control (Liska et al., 1981). Empirical support for this expectation has been rather mixed. Some studies on police strength in the United States did not find a significant relationship between crime rates and police strength (Carmichael & Kent, 2014; Kent & Jacobs, 2005; Loftin & McDowall, 1982; McCarty et al., 2012), but a few find at least partial support this link (Bordua & Haurek, 1971; Gurr, 1979; Jacobs & Helms, 1997; Kent & Carmichael, 2014; Liska et al., 1981). Despite such inconsistencies, theory and convention suggest that this relationship is important so we include serious crime rates in all of our analyses and predict that *cities with higher crime rates will have larger police departments.*

While a link between officially reported crime rates and police strength is plausible, police administrators and the public may perceive an increased need for law enforcement in socially disorganized places. Police must attend the issues related to general social disorder that are common in disadvantaged urban communities and so demands for formal social control are greater in communities with higher levels of social disorganization (e.g., Bursik, 1988; Rose & Clear, 2006; Sampson & Groves, 1989; Steenbeek & Hipp, 2011). But these calls for service, responses to unsupervised juveniles, and other common policing activities are not captured by official crime statistics. Prior

studies have included a variety of control measures to account for this *unmeasured disorder* including rates of poverty as well as the percentage of female-headed households (see Carmichael & Kent, 2014). We follow this approach to capturing disorder that may not be captured in conventional crime statistics by introducing two variables, that is, the percentage of single parent households and the percentage of the population that is below the poverty level. We predict that *cities with more single parent households and those with higher rates of poverty will have more police officers.*

Other control. It stands to reason that the size of metropolitan police departments is, at least in part, a function of a jurisdiction's ability to pay for such a service. Many recent studies on police strength have supported this expectation (Holmes et al., 2008; Kent & Carmichael, 2014; McCarty et al., 2012; Zhao et al., 2012). A number of scholars have suggested that a city's tax base is the best indication of available funds for law enforcement (Carmichael & Kent, 2014; Kent & Carmichael, 2014; Kent & Jacobs, 2005). Following these studies, *we assume that cities with a higher median income will have more police officers.* We also follow recent work on police strength conducted by Holmes, Smith, Freng, and Munoz (2008) and introduce a control for the overall population of each jurisdiction as city size may directly influence the need for policing such that *larger cities will demand more police protection that smaller ones.*

Method

The Sample and Dependent Variable

We test the above outlined hypotheses with a data set that includes figures from the 1996, 2001, and 2006 Canadian censuses on the 41 cities that had a population of 100,000 or more in the 2001 census (the middle year in our study). We analyze only the largest cities in Canada because we are interested in assessing how city officials in the major urban centers of the country determine police department staffing allocations. We assume that our results will not be generalizable to smaller jurisdictions. The choice of 100,000 residents as the minimum criteria for inclusion in our sample of cities was based on prior studies of police strength in the United States (e.g., Carmichael & Kent, 2014; Kent & Carmichael, 2014; Kent & Jacobs, 2005). While 41 cites over three separate census years would produce 123 city-years for our analysis, missing data reduce our sample to 116. We opted to reduce the influence of missing data by employing multiple imputation techniques available in Stata 12. Using this approach allowed us to increase our sample to 120 city-years. Our sample is reduced to 40 cities rather than 41 because vast missing data for Cape Breton, NS, made imputation impossible. See Appendix 2 for a list of the Canadian cities included in our sample.

We follow prior scholarship on police strength and only use data for census years (Carmichael & Kent, 2014; Greenberg & West, 2001; Kent & Carmichael, 2014; Kent & Jacobs, 2005). These studies have employed this particular estimation strategy primarily because data on most of the independent measures are unavailable during non-census years and imputation of missing years would introduce unnecessary measurement error. Furthermore, gaps between panels can reduce the risk of serial correlation that may degrade estimates (see Johnston & Dinardo, 1997). Thus, adopting this approach will allow us to produce the most reliable estimates of police strength in Canada.

Again, following prior scholarship in the area, we operationalize the dependent variable as the rate of police officers per 100,000 residents (e.g., Holmes et al., 2008; Kent & Carmichael, 2014; Kent & Jacobs, 2005; McCarty et al., 2012). Using a rate instead of raw counts is preferable because it allows us to account for the vast differences in population of the cities in our sample. We also follow this work by ensuring the appropriate causal order by introducing a 1-year lag between the dependent variable and the explanatory variables such that the independent variables in 1996 will be used to predict police strength in 1997, data for 2001 will be used to predict the outcome in 2002, and

so on. Finally, we opt to follow the approach adopted by Kent and Jacobs (2005) to reduce the influence of outliers as well as heteroskedasticity.

It is also important to note that while data for the 2011 Canadian census are available, it no longer gathered information on visible minority status and immigration. In fact, policymakers opted to eliminate the more detailed long-form survey that was used in previous Censuses. This long form asked individuals to identify a series of detailed questions about their immigration status and ethnic origin as well as income and employment characteristics. The short form given to all Canadian citizens in 2011 only asks the most basic information including the number of individuals in the household, their ages, marital status, and language spoken. There are no variables whatsoever related to racial/ethnic identity or immigration status. Given that these two factors are of central importance to our study, we do not include data beyond 2006 in our analyses. Data for the dependent variable are taken from the Canadian Centre for Justice Statistic's Police Resources in Canada (1997, 2002, and 2007).

Estimation

We employ a fixed-effects poled-time series estimation technique for all of our regression models. Using a pooled-time series is preferable to simple cross-sectional analyses because it can capture longitudinal variation in police strength. Following the vast majority of recent studies on police strength in the United Studies (Carmichael & Kent, 2014; Kent & Carmichael, 2014; Kent & Jacobs, 2005; McCarty et al., 2012; Zhao et al., 2012), we also use fixed-effects regression to automatically account for all time-invariant city-level factors that are not included in the model, such as cultural differences, variation in political arraignments, or policing strategies. Our models also include an examination of shifts in police strength over time. To account for this, we include a set of dummy variables for each decennial census year. In some of our models, we include interaction terms between minority group presence and these year dummies in an effort to test whether or not the influence of minority presence on police strength in Canadian cities has changed over time. Finally, all of our models include a correction for unspecified heteroskedasticity to ensure that our models are robust to problems with error variance.

Measurement

Data for the explanatory variables were taken almost exclusively from the Canadian censuses in 1996, 2001, and 2006. We measure racial and ethnic threat as the percentage of visible minorities in each city (this variable as well as a few other are estimated in their natural log form to reduce the influence of outliers as well as heteroskedasticity). Because immigrants may also be viewed as a threat to majority group members in Canada (Gordon, 2006), we also include the percentage of immigrant in our models. We also gauge ethnic threat using the percentage of aboriginal. Economic threat is operationalized with the rate of unemployment (the number unemployed as a percentage of the labor force). Unemployment figures are drawn from annualized summary statistics taken from the monthly Labor Force Survey, which is a nationwide survey of the employment status of civilians 15 years of age and older who are not institutionalized.

The extent of criminal activity is captured using the traditional measure of police-reported crime rate, which is the overall number of criminal incidents reported to and substantiated by the police per 100,000 residents. This measure includes all types of crime including both violent (murder, rape, robbery, and aggravated assault) and property crime (burglary, theft, and auto theft). While all crime statistics are imperfect because they only include crime that is reported, crime statistics are valuable because both the public and policymakers likely see them as a valid reflection of the crime problem and, if consensus theory is correct, respond to them by increasing police presence. Data for the crime

rates were taken from the Canadian Centre for Justice Statistics, Uniform Crime Reporting Surveys in 1996, 2001, and 2006.

Following prior studies on police strength (Carmichael & Kent, 2014; Kent & Carmichael, 2014; Kent & Jacobs, 2005), we account for differences in fiscal capacity using median household income. Household income acts as a proxy for the tax base of the city. Certainly, alternative measures exist such as tax revenue or spending on police, but these are flawed to the extent that they may be manipulated at any time by local politicians. Using household income as the proxy for resource differences is a better reflection of base resource capacities available to each city.

Scholars have provided strong evidence that social disorder contributes to crime rates in the Canadian context (e.g., Anderson, 2006; Wong, 2007, 2012). Wong (2007), for example, tested the influence of a series of family-related variables on crime rates and found that the proportion of single parent families within cities was one of the strongest determinants (divorce rates were not related to crime). Following Wong (2007), we control for this using the percentage of single parent families within each city. We also control for levels of poverty in each of the cities in our sample, as Krivo and Peterson (1996) identify a positive association between poverty rates and crime. These particular indicators should act as useful measures of disorder not captured by official crime statistics, but which may require additional police resources, as they have been associated with both a reduction in parental supervision and an increase in violence, both of which may make such communities more reliant on formal control measures such as the police to maintain order (for elaboration, see Furstenberg, Cook, Eccles, Elder, & Sameroff, 1999). Finally, we include the natural logarithmic transformation of city population in all of our models.

Results

Descriptive Statistics

Table 1 provides the means for each panel as well as the overall standard deviation and the range for each variable. Based on a review of these data, we see that there is enormous variation in the number of police officers per capita across the cities in our sample. Cities range in police strength from a low of roughly 87 (Levi, Quebec) officers per 100,000 residents to over 235 (Montreal, Quebec). Table 1 identifies the substantial variation in the size of the minority population such that some cities have less than 1%, while visible minorities and immigrants account for the demographic majority in other cities. Clearly, all three of the minority populations we study are geographically concentrated into particular cities and nearly absent from others. Our data show that neither the visible minority population nor the immigrant population reached a demographic majority in any city in Canada in 1996 (the highest were 49% and 48%, respectively), but by 2006, the visible minority population accounted for as much as 65% of the total population in Richmond, BC, and immigrants reached as high as 57% of the city's population. Finally, we see enormous variation in crime rates with some cities having as much as 5 times more crime than others. Our multivariate analyses will allow us to see if such substantial variation in a number of our theoretically interesting variables has an influence on the size of municipal police departments across Canada. Bivariate coefficients are presented in Appendix 1.

Multivariate Results

Table 2 presents the results from our fixed-effects, pooled time-series models of police strength in Canadian cities. Models 1 is our base models that includes our controls and our measure of economic threat. Model 2 builds on the limited specifications in our first model by including our measures of racial and ethnic threat. Findings from both of the regression models show that, after accounting for

Table 1. Predicted Signs and Descriptive Statistics.

Variable	Mean 1996	Mean 2001	Mean 2006	SD (overall)	Min (overall)	Max (overall)
Sworn police per 100,000 (ln)	4.965	4.945	5.026	0.222	4.465	5.599
Crime rate (ln)	9.205	9.007	8.947	0.355	8.207	9.918
Poverty rate	21.011	17.644	16.612	5.888	7.1	34.80
City population (ln)	12.354	12.421	12.567	0.913	10.607	14.733
Median household income (ln)	10.633	10.771	10.915	0.229	10.137	11.333
Percentage of single parent households	13.550	13.957	13.859	2.532	7.851	20.76
Unemployment rate (ln)	2.244	1.953	1.835	0.324	1.308	3.114
Percentage of visible minority (ln)	1.973	2.131	2.376	1.179	−0.894	4.171
Percentage of aboriginal (ln)	−0.094	0.123	0.386	0.988	−2.604	2.309
Percentage of immigrant	18.638	19.332	20.864	14.170	0.688	57.125

Note. N = 120 city-years.

Table 2. Pooled Time Series, Fixed-Effects Regression Estimates for the Natural Log of the Rate of Sworn Police Officers (Logged) Across Large Canadian Cities (Census Years, 1996, 2001, and 2006).

	Model 1	β Coefficients	Model 2	β Coefficients
Control variables				
Crime rate (ln)	.087 (.148)	.116	.000 (.000)	.226
Median household income (ln)	.734*** (.188)	.712	.383 (.207)	.338
City population (ln)	−.071 (.084)	−.344	−.184 (.096)	−.865
Percentage of single parent households	.007 (.019)	.044	−.003 (.019)	−.113
Poverty rate	.048** (.014)	1.302	.033** (.011)	.892
Economic threat				
Unemployment rate	−.197 (.111)	−.303	−.123 (.101)	−.224
Minority threat variables				
Percentage of visible minority	—	—	.260* (.118)	1.520
Percentage of aboriginal	—	—	.000 (.073)	.052
Percentage of immigrant	—	—	.004 (.007)	.212
Constant	−3.431		2.061	
# of city-years	120		120	
Adj. R^2	.891		.914	

Note. Robust standard errors are reported in parentheses (corrected for heteroskedasticity).
*$p \leq .05$; **$p \leq .01$; ***$p \leq .001$.

a number of other factors, cities with more single parent households do not have larger police forces but that with higher rates of poverty consistently do. This suggests that variations in police strength across Canadian cities may, in part, be explained by disorder not captured by official crime statistics (see additional considerations section subsequently for alternative specifications). Importantly, however, and despite our hypotheses, increases in the rate of crime do not appear to create demands for greater police protection across the large Canadian cities in our study. More modest support was found for the influence of median family income (our measure of the tax base) on police force size. Only our first model without the measures of ethnic threat suggests that greater budgets allow for an expansion in the size of municipal police departments. Our findings further show that larger unemployed populations have no effect on the dependent variable. We also found no support for the influence of city population, another conventional explanation for police force size. However, this study is primarily concerned with assessing the influence that alternative accounts may have on the size of municipal police departments in Canadian cities *after* accounting for these conventional explanations.

If legalistic or rational approaches are correct, once the extent of criminality, budget constraints, and differences in population are accounted for, other factors such as the size of the minority population should not influence police force size. The following findings shed light on this question.

Results from Model 2 show that, despite conventional expectations, the size of the ethnic minority population has a significant and positive influence on shifts in police department size in the cities in our sample. Specifically, it appears that cities with more visible minorities have larger police departments after crime rates, budget issues, and the population are accounted for. In fact, standardized coefficients suggest that the presence of visible minorities in a city is, by far, the most significant, positive predictor of police force size across Canadian cities.

Additional considerations. Beyond what we report in Table 2, we also analyzed a variety of alternative specifications of our models to assess the robustness of our findings (results not shown but available from the authors upon request). First, because more police officers could be needed to patrol larger geographical units, we included the land area of each city in our models. This measure failed to reach statistical significance and did not substantially alter our initial findings (i.e., all statistically significant results from Table 2 remained significant, once land area was included in the models). We also considered alternative specifications of minority compositions. In particular, we tested the total ethnic minorities of each city (% visible minority, % immigrant, and % aboriginal). This combined measure was positively related to police strength. We opted for separate measures, though, in order to investigate the unique effect of each minority group, and as we reported, there are distinct effects. We also tested interactions between our ethnic categories and unemployment to see whether these factors operated *jointly* to influence police strength, but these terms were not statistically significant.

Some theorists (Blalock, 1967) have argued that the relationship between levels of formal social control and the size of the minority population may be nonlinear and a number of studies examining police strength in the United States have supported such contentions (Carmichael & Kent, 2014; Jackson, 1985, 1986, 1989; Jackson & Carroll, 1981; Kent & Carmichael, 2014), so we included a quadratic term for the percentage of each ethnic group to test this possibility. Results showed that in our data, ethnic threat is best described in its linear form as the squared terms never reached the level of statistical significance. This suggests that, unlike in the United States, minority groups in Canada may not be able to mobilize effectively to change levels of policing in their communities.

We also considered alternative measures in order to capture sources of social disorder not enumerated in official crime statistics including the size of the young male population, and the percentage of divorced, but neither of these variables reached the level of statistical significance and did not affect the significance of other variables. Thus, it appears that lack of support for alternative sources of social disorder is consistent across measures. Finally, we tested total police expenditures as a percentage of the overall city budget as an alternative to our budgetary measure (median household income). This measure was not statistically associated with police strength. In any event, prior scholarship on policing in the United States suggests that expenditures are manipulated in response to structural conditions. Specifically, these studies have shown that the size of the minority population is one of the strongest predictors of police expenditures (Jackson, 1989; Nalla et al., 1997). Given this, the tax base measure we include in our models is superior to police expenditures because it is a more accurate measure of the financial constraints in each city and not simply another measure that city managers can manipulate.

Finally, it is noteworthy that some studies examining police strength in the United States measured crime with disaggregated crime statistics for both violent and property crime (e.g., Holmes et al., 2008; Stucky, 2005), while others looked only at violent crime (e.g., McCarty et al., 2012; Zhao et al., 2012) or murder rates (Kent & Jacobs, 2005). Still others use the overall crime rate as we do here (e.g., Carmichael & Kent, 2014; Kent & Carmichael, 2014; Sever, 2001). We opted for the overall crime rate primarily to ease presentation of our results but we did assess disaggregated

crime statistics and found that neither homicide rates nor violent crime rates influenced police strength, but that property crimes are statistically related to the outcome. Taken together, our findings appear to be very robust to changes in specification.

Discussion

Dozens of empirical studies on the size of municipal police departments have been conducted in the United States over the last 20 years, and the vast majority of this scholarship has pointed to the strong role that the racial composition of a city plays (See Sever, 2001 for review). Yet, despite such substantial interest in the United States, no study to date has attempted to isolate the factors associated with variations in police strength across Canadian cities. This is a rather surprising oversight given the substantial implications, particularly for members of an ethnic minority group, for greater police presence. Evidence from Canadian research, for example, suggests that heightened police protection should have serious consequences for minority group members because these individuals face discriminatory practices in the criminal justice system including racial profiling (e.g., Fitzgerald & Carrington, 2011; Wortley & Owusu-Bempah, 2011; Wortley & Tanner, 2003), higher arrest probabilities (Wortley, 1999), and greater likelihood of victimization by police officers (Pedicelli, 1998), and these groups are much more likely to face terms of incarceration for their crimes when compared to similarly situated White offenders (Roberts & Doob, 1997). Thus, minority communities in Canada that are more heavily policed have a greater chance of being caught-up in the criminal justice system where they will likely be treated more severely than majority group members. Yet, prior to this study, we knew little about why cities varied in police strength and we were unable to assess the degree to which racial threat hypotheses, so strongly supported in the U.S. police strength literature, are relevant in the Canadian context. The primary aim of this study was to fill this critical void in the literature on Canadian policing.

Together, the results from our regression analyses point to a robust relationship between the size of metropolitan police departments across large Canadian cities and specific contextual factors, particularly the city's ethnic composition and the level of poverty. These associations persist even after conventional accounts such as the crime rates, population, and budgetary constraints are accounted for. These findings are not only consistent with the vast majority of prior scholarship on police strength in the United States (e.g., Carmichael & Kent, 2014; Kent & Carmichael, 2014; Kent & Jacobs, 2005; Stucky, 2005) but they also offer strong support for the applicability of minority threat theory in Canada. Thus, despite rhetoric to the contrary, dominant group members in Canada appear to hold deep-seated prejudice and mistrust of ethnic minority groups and the consequences for minorities may be substantial, including greater criminal justice oversight of their communities.

Future Directions for Research

While our model was robust and included a broad set of variables to account for variations in police strength, we suggest, based on results from U.S. studies, that future scholarship in Canada should consider the effect of residential segregation on police department size. Both Carmichael and Kent (2014) and Kent and Carmichael (2014), for instance, found that large U.S. cities with the least racial residential segregation had significantly smaller rates of police strength than those with more racially concentrated neighborhoods, suggesting that negative stereotypes and fears associated with minority group members are reduced when they live in close proximity to one another (see Ellison & Powers, 1994 for elaboration). If ethnic threat theories are relevant in Canada, then it stands to reason that, like the United States, limiting the concentration of ethnic minorities into particular enclaves within a city could reduce the influence that minority group presence has on police force size or any other criminal justice outcome. Future scholarship is

needed to accurately test the applicability of such a claim in the Canadian context. Additionally, a more careful test of ethnic threat theories would require us to consider race-specific crime statistics. Unfortunately, as we mentioned earlier, there is what amounts to a ban on the collection and/or release of race-specific crime statistics in Canada. If Canadian officials change these policies, future scholarship should test these possibilities.

Finally, scholarship examining the effect of ethnic and/or immigrant status on a variety of societal outcomes has been hindered by the removal of the long form from the most recent Canadian census. Without the detailed data in this form, future tests of how the public and policymakers respond to the rapidly expanding immigrant populations or visible minority populations will be difficult or impossible to gauge. If policymakers do opt to reintroduce the detailed census, scholars should look to see how more recent shifts in minority populations may have influenced criminal justice outcomes such as police strength. Until then, alternative data sources (e.g., household surveys) should be considered to test the applicability of threat theory to other criminal justice outcomes in Canada.

Wider Implications

Conflict theorists have long argued that the legal order reflects the interests of the powerful and that the size of the state punishment apparatus is a direct response to perceived threats to these interests (Collins, 1975; Quinney, 1974). In fact, conflict theorists claim that the entire process of lawmaking and law enforcement is a direct result of the fundamental conflicts between groups in society as they struggle for control over state power (Chambliss, 1976; Vold, Bernard, & Snipes, 2002). Those theorists who subscribe to such claims assume that economic stratification, which favors majority group members, gives them disproportionate control over social policies such that they reflect their interests. In particular, conflict theorists assume that the legal code not only reflects the interests of the powerful but that the entire criminal justice system is a vehicle through which the dominant members of society enforce their views and regulate minority populations. While substantial support for this perspective has been offered by U.S. criminal justice scholarship, few studies have assessed the relevance of such claims in other societies. We filled this void in the literature by finding support for this theoretical account using data on police strength across Canadian cities.

To do this, we needed to diverge from the racial and ethnic dichotomies so familiar in the United States (i.e., Black/White and Hispanic/Non-Hispanic). Our account of minority groups in Canada instead assessed the association between visible minorities, immigrants, and aboriginal people and the size of metropolitan police departments in Canada. Our findings show that the size of these groups within Canadian cities produces increases in police strength consistent with conflict theory and the ethnic threat hypotheses that are drawn from it. Our empirical support for such a connection is not only consistent with theory and a sizable body of U.S. scholarship but also broader accounts of the perceptions of minority groups in Canadian society. For instance, in his account of the growing law-and-order agenda in Canada, Todd Gordon (2006) makes a rather compelling argument that the experiences of visible minorities, immigrants, and aboriginals take on a similar role in Canada as that of young African American males do in the United States. Speaking of these three minority groups in Canada, he suggests that "it is not simply that they meet some of the characteristics of a criminal, but that they have come to define the criminal." (Gordon, 2006, p. 47). He also provides evidence that policies and practices of the police in Canada came as a response to both the growing and changing face of immigrants and visible minorities in the country as well as in reaction to the September 11, 2001 terrorist attacks in New York City. It appears, then, that recent shifts toward a "law and order" agenda in Canada have, in part, been a response to perceived threats of ethnic minorities. Our study shows rather convincingly that city managers are manipulating the criminal justice system such that more officers will be employed to patrol the streets of ethnically diverse

communities. As we outlined earlier, such shifts in police presence have dire consequences for members of an ethnic minority group in Canada as it becomes increasingly likely that they will be apprehended and adjudicated in a criminal justice system that has been shown to treat them unfairly.

Appendix 1. Correlation Matrix

Variable	1	2	3	4	5	6	7	8	9	10
1. Sworn police officers per 100,000 (ln)	1.000									
2. Crime rates (ln)	.359	1.000								
3. Poverty rates	.293	.471	1.000							
4. Percentage of female headed households	.555	.343	.568	1.000						
5. Median family income (ln)	−.224	−.426	−.762	.581	1.000					
6. Population (ln)	.367	−.091	.050	−.070	.273	1.000				
7. Unemployment rate	.140	.274	.604	.441	−.763	−.223	1.000			
8. Percentage of visible minority (ln)	.113	.196	.115	−.213	.402	.555	−.363	1.000		
9. Percentage of immigrant	.004	.083	.167	−.302	.348	.496	−.221	.901	1.000	
10. Percentage of aboriginal	.316	.525	−.164	.106	.103	−.064	−.196	.029	−.115	1.000

Note. N = 120 city-years.

Appendix 2. Canadian Cities in Our Sample

1. Calgary, AB
2. Edmonton, AB
3. Abbotsford, BC
4. Burnaby, BC
5. Coquitlam, BC
6. Richmond, BC
7. Saanich, BC
8. Surrey, BC
9. Vancouver, BC
10. Winnipeg, MB
11. St. Johns, NL
12. Halifax, NS
13. Barrie, ON
14. Burlington, ON
15. Catham-Kent, ON
16. Guelph, ON
17. Hamilton, ON
18. Kingston, ON
19. Kitchener, ON
20. London, ON
21. Markham, ON
22. Mississauga, ON
23. Oshawa, ON
24. Ottawa, ON

Appendix 2. (continued)

25. St. Catharine's, ON
26. Sudbury, ON
27. Thunder Bay, ON
28. Toronto, ON
29. Windsor, ON
30. Gatineau, QC
31. Laval, QC
32. Levis, QC
33. Longueuil, QC
34. Montreal, QC
35. Quebec City, QC
36. Saguenay, QC
37. Sherbrooke, QC
38. Trois-rivieres, QC
39. Regina, SK
40. Saskatoon, SK

References

Ali, J., McDermott, S., & Gravel, R. G. (2004). Recent research on immigrant health from statistics Canada's population surveys. *Canadian Journal of Public Health, 95*, 9–13.

Anderson, M. A. (2006). A spatial analysis of crime in Vancouver, British Columbia: A synthesis of social disorganization theory and routine activities theory. *The Canadian Geographer, 50*, 487–502.

Beckett, K. (1997). *Making crime pay: Law and order in contemporary american politics*. New York, NY: Oxford University Press.

Blau, J., & Blau, P. R. (1982). The cost of inequality: Metropolitan structure and violent crime. *American Sociological Review, 47*, 114–129.

Blalock, H. (1967). *Toward a theory of minority group relations*. New York, NY: Capricorn Books.

Blumer, H. (1958). Race prejudice as a sense of group position. *Pacific Sociological Review, 1*, 3–7.

Bobo, L. (1999). Prejudice as group position: The microfoundations of a sociological approach to racism and race relations. *Journal of Social Issues, 55*, 445–472.

Bobo, L., & Hutchings, V. (1996). Perceptions of racial group competition: Extending Blumer's theory of group position in a multiracial social context. *American Sociological Review, 61*, 951–972.

Bordua, D. J., & Haurek, E. W. (1971). The police budget's lot. In H. Harlan (Ed.), *Police in urban society* (pp. 57–69). Beverly Hills, CA: Sage.

Bowling, B., & Phillips, C. (2002). *Racism, crime and justice*. Harlow, England: Pearson Education.

Bursik, R. J. (1988). Social disorganization and theories of crime and delinquency: Problems and prospects. *Criminology, 26*, 519–551.

Canadian Centre for Justice Statistics. (1997, 2002, 2007). *Police resources in Canada*. Ottawa, ON: Canadian Centre for Justice Statistics. Catalogue No. 85-225-XIE.

Cao, L. (2011). Visible minorities and confidence in the police. *Canadian Journal of Criminology and Criminal Justice, 53,* 1–26.

Carmichael, J. T. (2005). The determinants of jail use across large U.S. cities: An assessment of racial, ethnic, and economic threat explanations. *Social Science Research, 34,* 538–548.

Carmichael, J. T. (2010). Sentencing disparities for juvenile offenders sentenced to adult prisons: An individual and contextual analysis. *Journal of Criminal Justice, 38,* 747–757.

Carmichael, J. T., & Burgos, G. (2012). Sentencing juvenile offenders to life in prison: The political sociology of juvenile punishment. *American Journal of Criminal Justice, 37,* 602–629.

Carmichael, J. T., & Kent, S. L. (2014). The persistent significance of racial and economic inequality on the size of municipal police forces in the United States, 1980–2010. *Social Problems, 61,* 1–24.

Chambliss, W. J. (1976). Vice, corruption, bureaucracy and power. In W. J. Chambliss & M. Mankoff (Eds.), *Whose law, what order? A conflict approach to criminology* (pp. 162–182). New York, NY: John Wiley.

Chiricos, T. G., & Crawford, C. (1995). Race and imprisonment: A contextual assessment of the evidence. In D. F. Hawkins (Ed.), *Ethnicity, race and crime: Perspectives across time and place* (pp. 281–309). Albany, NY: State University of New York Press.

Chiricos, T. G., & Delone, M. A. (1992). Labor surplus and punishment: A review and assessment of theory and evidence. *Social Problems, 39,* 421–446.

Collins, R. (1975). *Conflict sociology.* New York, NY: Academic Press.

Commission on Systemic Racism. (1995). *Report of the commission on systemic racism in the Ontario criminal justice system.* Toronto, Canada: Queen's Printer for Ontario.

Ellison, C. G., & Powers, D. A. (1994). The contact hypothesis and racial attitudes among Black Americans. *Social Science Quarterly, 75,* 385–400.

Fitzgerald, R. T., & Carrington, P. J. (2011). Disproportionate minority contact in Canada: Police and visible minority youth. *Canadian Journal of Criminology and Criminal Justice, 53,* 449–486.

Furstenberg, F. F, Jr., Cook, T., Eccles, J., Elder, G. H., Jr., & Sameroff, A. (1999). *Managing to make it: Urban families and adolescent success.* Chicago, IL: University of Chicago Press.

Garland, D. (1990). *Punishment and modern society.* Chicago, IL: University of Chicago Press.

Gordon, T. (2006). *Cops, crime and capitalism: The law and order agenda in Canada.* Halifax, England: Fernwood.

Greenberg, D. F., & West, V. (2001). State prison populations and their growth, 1971–1991. *Criminology, 39,* 615–654.

Gurr, T. R. (1979). On the history of violent crime in Europe and America. In H. D. Graham & T. R. Gurr (Eds.), *Violence in America: Historical and comparative perspectives* (pp. 544–596). Beverly Hills, CA: Sage.

Hogan, B., & Berry, B. (2011). Racial and ethnic bias in rental housing: An audit study of online apartment listings. *City and Community, 10,* 351–372.

Holmes, M. D., Smith, B. W., Freng, A. B., & Munoz, E. A. (2008). Minority threat, crime control, and police resource allocation in the Southwestern United States. *Crime and Delinquency, 54,* 128–154.

Hou, F., & Coulombe, S. (2010). Earnings gaps for Canadian-born visible minorities in the public and private sectors. *Canadian Public Policy, 36,* 29–43.

Jackson, P. I. (1985). Ethnicity, region, and public fiscal commitment to policing. *Justice Quarterly, 2,* 167–195.

Jackson, P. I. (1986). Black visibility, city size, and social control. *Sociological Quarterly, 27,* 185–203.

Jackson, P. I. (1989). *Minority group threat, crime and policing.* New York, NY: Praeger.

Jackson, P. I., & Carroll, L. (1981). Race and the war on crime: The sociopolitical determinants of municipal police expenditures in 90 non-southern U.S. cities. *American Sociological Review, 46,* 290–305.

Jacobs, D. (1979). Inequality and police strength: Conflict theory and coercive control in metropolitan areas. *American Sociological Review, 44,* 913–925.

Jacobs, D., & Carmichael, J. T. (2001). The politics of punishment across time and space: A pooled time series analysis of imprisonment rates. *Social Forces, 80,* 61–89.

Jacobs, D., & Carmichael, J. T. (2004). Ideology, social threat, and death sentences: Capital sentencing across time and space. *Social Forces*, *83*, 249–278.

Jacobs, D., & Helms, R. (1997). Testing coercive explanations for order: The determinants of law enforcement strength over time. *Social Forces*, *75*, 1361–1392.

Jacobs, D., & Helms, R. (1999). Collective outbursts, politics, and punitive resources: Toward a political sociology of spending on social control. *Social Forces*, *77*, 1497–1523.

Jankovic, I. (1977). Labor market and imprisonment. *Crime and Social Justice*, *8*, 17–31.

Johnston, J., & DiNardo, J. (1997). *Econometric methods*. New York, NY: McGraw Hill.

Kellough, G., & Wortley, S. (2002). Remand for plea: The impact of race, pre-trial detention and over-charging on plea bargaining decisions. *British Journal of Criminology*, *42*, 186–210.

Kent, S. L., & Carmichael, J. T. (2014). Racial residential segregation and social control: A panel study of variations in police strength across U.S. cities, 1980–2010. *American Journal of Criminal Justice*, *39*, 228–249.

Kent, S. L., & Jacobs, D. (2005). Minority threat and police strength from 1980 to 2000: A fixed-effects analysis of nonlinear and interactive effects in large cities. *Criminology*, *43*, 731–760.

Krivo, L. J., & Peterson, R. D. (1996). Extremely disadvantaged neighborhoods and urban crime. *Social Forces*, *75*, 619–648.

Lee, M. T., & Martinez, R., Jr. (2009). Immigration reduces crime: A review of the emerging scholarly consensus. In W. F. McDonald (Ed.), *Immigration, crime and justice. Sociology of crime, law, and deviance, Vol. 13* (pp. 3–16). Bingley, England: Emerald.

Lenski, G. (1966). *Power and privilege*. New York, NY: Macmillan.

Liska, A. E., Lawrence, J. J., & Benson, M. (1981). Perspectives on the legal order. *American Journal of Sociology*, *87*, 412–426.

Loftin, C., & McDowall, D. (1982). The police, crime and economic theory. *American Sociological Review*, *47*, 633–644.

Markert, J. (2010). The changing face of racial discrimination: Hispanics as the dominant minority in the USA—A new application of power-threat theory. *Critical Sociology*, *36*, 307–327.

McCarty, W. P., Ren, L., & Jihong, Z. (2012). Determinants of police strength in large U.S. cities during the 1990s: A fixed-effects panel analysis. *Crime and Delinquency*, *58*, 397–424.

Millar, P., & Owusu-Bempah, A. (2011). Whitewashing criminal justice in Canada: Preventing research through data suppression. *Canadian Journal of Law and Society*, *26*, 653–661

Nalla, M. K., Lynch, M. J., & Leiber, M. J. (1997). Determinants of police growth in phoenix, 1950–1988. *Justice Quarterly*, *14*, 115–142.

Pedicelli, G. (1998). *When police kill: Police use of force in Montreal and Toronto*. Montreal, Canada: Vehicule.

Pendakur, K., & Pendakur, R. (2011). Color by numbers: Minority earnings in Canada 1995–2005. *Journal of International Migration and Integration*, *12*, 305–329.

Perez, C. E. (2002). *Health status and health behavior among immigrants*. Ottawa, ON: Statistics Canada. Catalogue 82–003.

Piven, F. F., & Cloward, R. A. (1979). *Poor people's movements: Why they succeed, how they fail*. New York, NY: Random House.

Quinney, R. (1974). *Critique of the legal order*. Boston, MA: Little, Brown.

Quinney, R. (1977). *Class, state and crime: On the theory and practice of criminal justice*. New, York, NY: Longman.

Roberts, J., & Doob, A. (1997). Race, ethnicity, and criminal justice in Canada. In M. Tonry (Ed.), *Ethnicity, crime, and immigration: Comparative and cross-national perspectives*, Vol. 21 (pp. 469–522). Chicago, IL: University of Chicago Press.

Rose, D. R., & Clear, T. (2006). Incarceration, social capital, and crime: Implications for social disorganization theory. *Criminology*, *36*, 441–480.

Rusche, G., & Kirchheimer, O. (1939). *Punishment and social structure*. New York, NY: Russell and Russell.

Sampson, R., & Groves, W. B. (1989). Community structure and crime: Testing social disorganization theory. *American Journal of Sociology, 94*, 774–802.

Sever, B. (2001). The relationship between minority populations and police force strength: Expanding our knowledge. *Police Quarterly, 4*, 28–68.

Skuterud, M. (2010). The visible minority earnings gap across generations of Canadians. *Canadian Journal of Economics, 43*, 860–881.

Statistics Canada. (1961). *Census of Canada 1961*. Ottawa: Statistics Canada. No. A125–163.

Statistics Canada. (2001). *Visible minorities in Canada*. Ottawa: Statistics Canada. Catalogue. No. 85F0033MIE.

Statistics Canada. (2011). *National household survey*. Ottawa: Statistics Canada. No. 99-010-X2011001.

Steenbeek, W., & Hipp, J. R. (2011). A longitudinal test of social disorganization theory: Feedback effects among cohesion, social control, and disorder. *Criminology, 49*, 833–871.

Stucky, T. D. (2005). Local politics and police strength. *Justice Quarterly, 22*, 139–169.

Sutton, J. (2000). Imprisonment and social classification in five common-law democracies,1955–1985. *American Journal of Sociology, 106*, 350–386.

Turk, A. T. (1969). *Criminality and the Legal Order*. Chicago, IL: Rand McNally.

Vold, G. B., Bernard, T. J., & Snipes, J. B. (2002). *Theoretical criminology*. New York, NY: Oxford University Press.

Wong, S. K. (2007). Disorganization precursors, the family and crime: A multi-year analysis of Canadian municipalities. *Western Criminology Review, 8*, 48–68.

Wong, S. K. (2012) Youth crime and family disruption in Canadian municipalities: An adaptation of Shaw and McKay's social disorganization theory. *International Journal of Law, Crime and Justice, 40*, 100–114.

World Migration Report. (2010). *The future of migration: Building capacities for change*. Retrieved from http://www.jcp.ge/iom/pdf/WMR_2010_ENGLISH.pdf

Wortley, S. (1999). A northern taboo: Research on race, crime, and criminal justice in Canada. *Canadian Journal of Criminology, 41*, 261–274.

Wortly, S. (2003). Hidden intersections: Research on race, crime, and criminal justice in Canada. *Canadian Ethnic Studies, 35*, 99–117.

Wortley, S., & Tanner, J. (2003). Data, denials and controversy: The racial profiling debate in Toronto. *Canadian Journal of Criminology and Criminal Justice, 45*, 367–390.

Wortley, S., & Owusu-Bempah, A. (2011). The usual suspects: Police stop and search practices in Canada. *Policing & Society, 21*, 395–407.

Zhao, J., Ren, L., & Lovrich, N. (2012). Political culture vs. socioeconomic approaches to predicting police strength in U.S. police agencies: Results of a longitudinal study, 1993–2003. *Crime & Delinquency, 58*, 167–195.

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