ANNUAL REVIEWS

Exceptionally Lethal: American Police Killings in a Comparative Perspective

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Abstract

Police in the United States stand out in the developed world for their reliance on deadly force. Other nations in the Americas, however, feature higher or similar levels of fatal police violence (FPV). Cross-national comparative analyses can help identify stable and malleable factors that distinguish high-FPV from low-FPV countries. Two factors that clearly stand out among high-FPV nations are elevated rates of gun violence—which fosters a preoccupation with danger and wide latitude to use preemptive force—and ethnoracial inequality and discord. The latter seems to be tied to another fundamental difference between the United States and most other developed nations—the "radically decentralized structure of U.S. policing" (Bayley & Stenning 2016). Hyperlocalism limits the influence of external oversight, along with expertise and resources for effective training, policy implementation, and accountability. However, elevated rates of FPV among some Latin American countries with relatively centralized policing demonstrate that decentralization is not a necessary condition for high FPV. Likewise, relatively low FPV in Spain and Chile suggests that achieving low FPV is also possible without the extensive resources and training that appear to suppress FPV in wealthy Northern European nations.

INTRODUCTION

With respect to crime and justice, the United States stands out from other developed (and many developing) nations in several respects. Drawing the most curiosity and concern are gun violence, mass incarceration, and our retention of capital punishment. Another domain of American exceptionalism that has attracted widespread attention in recent years is our peculiarly high rate of fatal police encounters. To illustrate, the United States' fatal police shootings (FPSs) rate in 2019 (3.1 per million) was 5 and 22 times higher than Australia's (0.64) and France's (0.14), respectively (see **Table 1**).

This article's principal aim is to examine why police lethality in the United States diverges from comparable nations. Whereas most prior theories and analyses consider only a few explanations such as civilians' access to firearms, this analysis is predicated on an expansive model of rates of deadly force, which promotes consideration of a wider range of explanatory factors. In addition, most comparative discussions of lethal policing (with notable exceptions such as Chevigny 1995) compare America's police to police in Western Europe or other developed nations with similar colonial roots like Canada and Australia (Hirschfeld 2020). However, the United States also shares key historical, demographic, and criminogenic elements with some Latin American countries, grounding additional fruitful comparisons (Waddington et al. 2009).

Although a review of prior comparative work promises to distill a set of factors that distinguish the United States from European countries with lower police lethality levels and from Latin American countries with higher levels, the number of plausible explanations is likely too voluminous to be theoretically satisfying or useful for guiding reforms. Therefore, this article aims to not only derive plausible explanations from the extant literature but also draw upon exploratory comparative analytics (and conventional quantitative reasoning) to identify explanations that deserve greater weight. Among the potential explanations for America's exceptionally lethal policing (AELP), the following deserve extra consideration: (*a*) factors that strongly correlate with fatal

Table 1   Annual rates of total fatal police violence (FPV) and fatal police shootings (FPSs) for select countries

Country	Year	FPV count	FPV rate (per 1 million)	FPS count	FPS rate (per 1 million)
Venezuela	2019	5,286[1]	185.371	ND	ND
Brazil	2020	6,416[2]	30.185	ND	ND
United States	2020	1,133[3]	3.418	1,021[4]	3.080
Argentina	2019	95[5]	2.121	ND	ND
Chile	2018	ND	ND	21[6]	1.121
Canada	2019	34[7]	0.909	22[7]	0.588
Australia	2019 FY	18[8]	0.714	16[8]	0.635
Belgium	2018	4[9]	0.348	ND	ND
France	2019	19[10]	0.292	9[10]	0.138
England and Wales	2019 FY	17[11]	0.286	3[11]	0.050
Netherlands	2017/2019	4[12]	0.235	4[13]	0.234
Germany	2018	ND	ND	11[14]	0.132
Switzerland	2019	ND	ND	1[15]	0.116
Sweden	2019	ND	ND	1[16]	0.100
Denmark, Finland, Spain/Norway	2018/2019	0[17,18,19,20]	0	0[17,18,19,20]	0.000

Superscripted numbers refer to measures and sources that can be found in the **Supplemental Material**.
Abbreviation: FY, fiscal year; ND, no data.

Supplemental Material >

police violence (FPV) such that international (and, optionally, intranational) gradations in them closely correspond to gradations in FPV, (*b*) nonredundant conditions that are present among all high-FPV or all low-FPV nations; in the parlance of qualitative comparative analysis (QCA), they are necessary conditions for an outcome (Cooper & Glaesser 2016), and (*c*) variable conditions or sets of conditions whose presence in a country always predicts high or low FPV; QCA identifies these factors as sufficient conditions for an outcome. Rather than attempt a formal QCA, I apply QCA logic to extant literature and readily accessible knowledge to suggest priority explanations for future research and policy deliberations.

Expanding the scope of comparative inquiry to Latin America is important. Cross-national comparative research is beset with limited diversity, whereby smaller samples fail "to supply information on all possible combinations of the putatively causal factors picked out by configurational models" (Cooper & Glaesser 2016, p. 301). This problem is particularly acute when comparing American crime and policing to Western Europe's, given that the latter nations are beholden to the same human rights obligations and uniformly feature low levels of gun violence and FPV. Including Argentina, Brazil, Chile, and Venezuela enhances diversity with respect to commitment to human rights, racial discord, resources for police training, gun violence, and FPV.

INTERNATIONAL COMPARISONS IN THE RATES OF POLICE LETHALITY

Comparative analyses of police lethality are ideally anchored to reliable and standardized measures of countries' rates of FPV. However, compiling accurate and comparable statistics is challenging. In many countries, including the United States, police and their oversight bodies are not required to report all such fatalities, and reports are often unreliable (GBD 2019 Police Violence US Subnatl. Collab. 2021, Rappert et al. 2020). In addition, government agencies vary in the types of incidents that make up their official counts. Because police kill rarely in most nations, rates are highly sensitive to measurement variation. Some relatively common incident types in some countries that are inconsistently omitted from national statistics include killings by off-duty police officers and deaths during police confinement (which occur more often in countries like Russia where prolonged periods in police custody are common) or that did not involve intentional police violence (alleged suicides, overdoses, and accidents during pursuits).

Because of such holes and inconsistencies in official records, researchers often painstakingly work to supplement (e.g., via news accounts, inquests, and court cases) and curate official statistics. Some gaps, however, cannot be filled. Killings particularly likely to elude any statistical aggregation are those carried out unofficially. For this reason, I exclude from consideration Mexico, where police have committed clandestine murders, including of 43 Mexican graduate students in 2014, on behalf of or in concert with organized crime (Kryt 2021). How many police victims are among the 93,000 people who have vanished during Mexico's bloody cartel wars is unknowable (Kryt 2021).

To promote manageable and reliable comparisons derived from prior literature, I limit the focal Western countries to a subset of relatively populous and wealthy developed nations with roughly comparable and trustworthy data on FPV. I similarly selected only populous South American countries with relatively reliable and comparable data on FPV. To enhance reliability, some analysts limit comparisons to deaths by police gunfire. The drawback of this approach is that in some countries, especially those like the United Kingdom, which severely restrict police firearm access, other forms of FPV (e.g., deaths following routine restraint procedures, which do not always contribute to the recorded deaths) are more common (IOPC 2020). For this reason, I also provide estimates of overall FPV when readily available. **Table 1** presents these rates in order of police lethality for focal countries. Rates are presented for only one year (between 2018 and 2020,

with one exception). Because the incidence of FPV is so low in most European countries, rates are sensitive to year-to-year fluctuations. In most sizable countries for which reliable trend data are available, including Canada, Germany, the United Kingdom, and the United States, the single-year rates in **Table 1** approximate central tendencies across recent years (Der Spiegel 2019, IOPC 2020, Singh 2020). An exception is Australia, whose 16 FPSs in 2019–2020 were markedly higher than the 8 and 9 fatal shootings in the previous two years, respectively (Doherty & Sullivan 2021).

A MODEL OF FATAL POLICE VIOLENCE RATES

The incidence of FPV in a country is a direct function of the number of volatile police encounters and patterns of police and civilian behavior during these encounters. Numerous factors are subsumed under each of these three categories, each of which is shaped by various cultural, social, organizational, political, and legal forces. In the radically decentralized policing context of the United States (Bayley & Stenning 2016), local-level influences are salient, whereas national political and legal influences are more salient in countries like France with nationally administered police forces. But in each country, a combination of local, regional, and national influences shape FPV rates. To lend some order to this complexity, **Figure 1** decomposes the three major direct explanatory categories—volatile encounters (VEs), police responses, and civilian responses—into various dimensions and proximate influences. Importantly, these factors not only influence each other as depicted but also interact in variable, dynamic ways depending on the local, regional, and national context. The same behaviors and situations may, sensibly and normatively, invoke radically different interpretations in variable contexts. **Table 2** depicts for the focal countries several relatively clear-cut external factors that, in theory, influence the three key components of the FPV model.

The first omnibus predictor of national FPV rates is the incidence of potentially dangerous police encounters (VEs). Police are uniformly trained to apply force proportional to the level of threat they perceive. Thus, greater actual and perceived levels of threat yield more frequent and severe force. Comparing aggregate threat levels across countries is challenging given that the threat particular behaviors present is situationally and contextually dependent. For example, suspects reaching into jackets, cars, or waistbands are more threatening in countries where handguns are
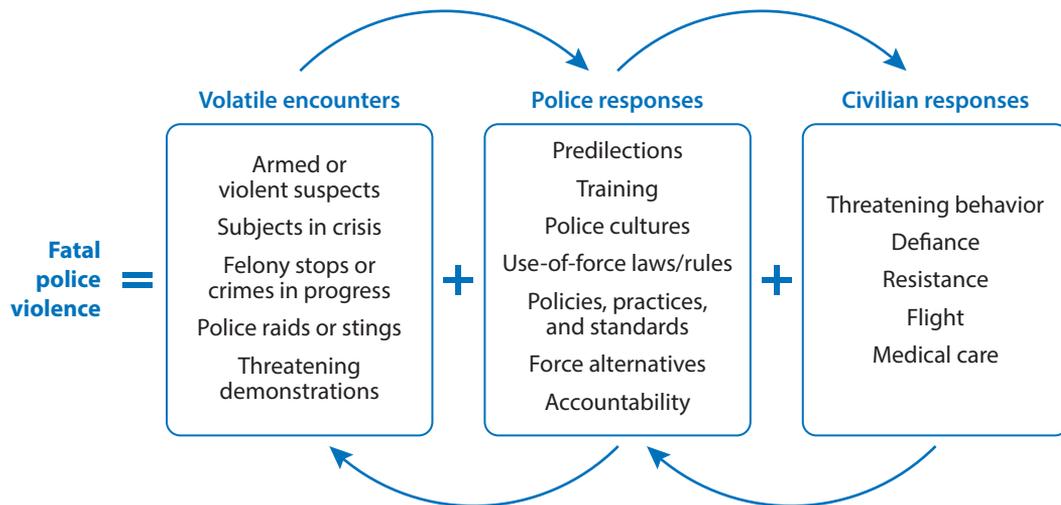

Figure 1

A model of the incidence of fatal police violence within an organizational or geographic unit.

Table 2 Fatal police violence (FPV) rates and theorized predictors across eighteen countries

Country	FPV rate (see Table 1)	Public social expenditures as % GDP (2018)[1]	Income inequality (Gini coefficient, 2019)[2]	Gun homicides/100,000 (2018)[3]	Decentralization (independent departments/100,000)	Average months classroom training (range)	Enforceable legal threshold for deadly force[4]	Minority treatment (composite index)[5,6,7]
Venezuela	185.371	ND	ND	51.102	0.528[8]	24[9]	Necessity (unenforced)[10]	2.4
Brazil	30.185	16.7	0.535	22.300	0.139[11]	12[10]	State: necessity (unenforced) Federal: overcoming resistance[12]	5.4
United States	3.4	18.7	0.395	3.770	4.623[13]	5.25[14]	Reasonable belief	6.3
Argentina	2.121	ND	0.429	2.935	0.066[15]	24 (12,36)[16]	Necessity	7.2
Chile	1.121	10.9	0.46	2.098	0.010[17]	12[18]	Necessity	7.1
Canada	0.909	17.3	0.301	0.704	0.539[19]	6.5 (3.25–11.25)[20]	Reasonable belief	7.7
Australia	0.714	17.8	0.325	0.145	0.031[21]	7 (6–8)[22]	Reasonable belief	7.3
Belgium	0.348	28.9	0.262	0.488	1.710[23]	8[24]	Necessity	7.3
France	0.292	31.2	0.292	0.497	0.004[25]	9.4 (8,10)[26]	Necessity (deficient policies)	6.3
England and Wales	0.286	20.6	0.366	0.051	0.066[21]	6.5 (+17.5 on the job)[27]	Necessity	6.5
Netherlands	0.235	16.7	0.296	0.234	0.006[28]	12 (+12 on the job)[29]	Necessity	7.4
Germany	0.132	25.1	0.289	0.144	0.022[10]	19.5 (18–21)[30]	Necessity	7.5
Switzerland	0.116	16.0	0.311	0.199	0.314[31]	12 (5–24)[31]	Necessity	7.8
Sweden	0.1	26.1	0.28	0.381	0.010[32]	24[33]	Necessity	8.8
Denmark	0	28.0	0.263	0.139	0.017[32]	18[34]	Necessity	8.2
Finland	0	28.7	0.269	0.272	0.018[32]	36[32]	Necessity	9.1
Norway	0	25.0	0.261	0.075	0.019[32]	24[32]	Necessity	8.6
Spain	0	23.7	0.32	0.084	0.017, 1.591[35]	9.5[32]	Necessity	6.9

Superscripted numbers refer to measures and sources that can be found in the **Supplemental Materials**.
Abbreviation: ND, not determined.

prevalent. And mass demonstrations are generally more threatening in unstable and undemocratic countries (Shor et al. 2014). However, certain situations consistently portend violence no matter how well-prepared police are to respond. For example, purportedly armed suspects committing or threatening violence or fresh from injuring someone are more likely than other suspects to provoke mortal fear, regardless of police proficiency and restraint. Their prevalence inevitably increases the deployment of deadly force and, importantly, is largely outside of police control. For example, the portion of suspects with accessible guns is directly related to the prevalence of civilian firearms (Zimring 2017). Likewise, the number of police summoned to mental health or drug-induced crises likely depends on the accessibility of effective interventions and stable housing and support for those suffering from mental illness (and related issues like homelessness and drug abuse) (Hirschfield 2015).

That said, police determine the volume of some VE types. Orchestrated raids and stings that are designed to surprise and overwhelm fugitives and "suspects" are especially dangerous because they may trigger an impulsive fight or flight response rather than peaceful submission. Numerous American civilians have been killed during raids after mistaking the police for civilian intruders and taking defensive measures (Balko 2013). Of course, police stings and raids are more lethal where guns are more accessible and where extrajudicial murder is routine (Brazil).

The second major source of international variation in police lethality is how police respond in volatile situations. Research demonstrates considerable diversity in police personality and work orientation even within the same agencies (Paoline & Gau 2018). Police departments also vary considerably, especially where policy-making and operational authority are decentralized across units of local and state government (Sherman 2018). But police behavior also varies systematically and markedly between countries, thanks to global diversity in laws, systems of police training and governance, cultural norms, and prevailing policies, standards, and practices (Bayley 1985, Chevigny 1995). Some context-variant aspects of police perception and behavior that should influence police lethality include how often police expect to encounter hostile, armed suspects, their recourse to less-lethal and peaceful resolutions, training and directives regarding the use of hyperaggressive or deadly tactics (e.g., when to start and stop shooting), and the likelihood that such tactics would violate policy (Sherman 2018).

Police responses in murky or volatile situations are strongly influenced by the behavior of suspects. Evading, resisting, fighting, or in any way threatening police greatly hastens their resort to violence (Sherman 2018). In countries with more antipathy toward the police and more impairments (linguistic, cognitive, hearing, biochemical, disorienting fear, etc.) that hinder compliance with police commands, more police encounters likely end tragically, especially when weapons are involved or suspected. Medical professionals are additional civilians that influence the lethality of police violence. Victims of police violence in countries that deliver prompt and effective medical care should face lower mortality (Nix & Shjarback 2021).

CAN INEQUALITY AND RACISM EXPLAIN INTERNATIONAL VARIATION?

This model of FPV is useful to thoroughly delineate specific plausible explanations of international variation in police lethality, including policies and protocols that are relatively malleable. However, a major drawback of decomposing explanations of FPV in this manner is that it directs attention to elements of encounters that confront individual police officers and their organizations rather than to broader aspects of societies and governments that shape institutional norms and practices. In short, the approach may highlight several prominent trees while obscuring the forest.

Critical and conflict theories offer overarching frameworks that can help one interpret international variation in police lethality. Such theories focus on how police violence helps reproduce social inequalities and exclusion in service of dominant groups (Bonner et al. 2018, Seri & Lokaneeta 2018). Although critical theories vary in the amount of autonomy they accord to police and other state agencies, they agree that states contending with gross inequality and economic insecurity tend to rely more on repressive measures, both to compensate for ineffectual government institutions and to contain threats to prevailing power alignments (Chevigny 1995, Gabaldón 2009). Although civilians who request police intervention and coercion and may endorse police violence are disproportionately poor or working class, conflict theorists generally view such patterns as in the service of the ruling elite because they pacify the population and preserve the status quo (Paes-Machado & Noronha 2002).

As **Table 2** shows, the United States has lower public social spending (relative to GDP) compared to the other focal democracies and has higher levels of income inequality. However, these disparities (e.g., 38% higher GINI coefficient than typical Western European countries) are miniscule compared to FPV gaps. In fact, Chile's lower social spending and higher inequality relative to the United States belies the direction of their FPV differences.

Explanations that focus on the severity of police racism and the portion of the population that is subject to it are also unhelpful in explaining AELP. African Americans and Native Americans, unlike most marginalized minority communities in Europe, have endured centuries of subjugation, oppression, and segregation, which differential policing helps sustain. Adherents of minority threat perspectives assert that selective police surveillance, stops, searches, and arrests of African Americans (Fagan et al. 2016), along with biased judgments of hostile intent, help explain why Black Americans are nearly 2.5 times more likely to be killed by the police than non-Hispanic Whites (Fagan & Campbell 2020). And perhaps the portion of Americans who are routinely subject to ethnoracial discrimination or oppression is larger in the United States than in other advanced democracies. To roughly estimate, approximately 13% of Americans in 2020 identified as African or Native American and 4% as multiracial, while 3.6% were Latino Americans (any race) living below the poverty line (and about 6% were Spanish-speaking immigrants). If no low-FPV country approaches the United States' level of racial marginalization and oppression, then a uniquely prevalent or virulent strain of contemporary racism plausibly explains AELP.

This argument crumples under further scrutiny. First, countries like Belgium, France, and the Netherlands also have sizable ethnic minority populations that suffer rampant and largely unchecked discrimination, including by the police (O'Leary 2020, Open Soc. Justice Initiat. & Amnesty Int. 2013). Although the French government prohibits official racial designations, research suggests that people of African descent make up at least 10% of the French population (INSEE 2012). Muslims make up an estimated 7.6% and 7.1% of Belgium and the Netherlands, respectively (Hackett 2017). Although the size and composition of marginalized minority populations vary across countries and elude precise measurement, the undeniable pattern across Western Europe is that the mistreatment of minority groups rarely culminates in FPV. The second and more definitive grounds to rule out the distinctly poor treatment of minority groups as a major explanation are that US minorities—whether African, Latino, or Native Americans—comprise too few FPV victims to account for a sizable share of the gaps in FPV rates. To illustrate, when minorities are included, the United States' FPV rate is 11.7 times as large as France's. However, non-Hispanic White Americans, who make up about 51% of all decedents (Lett et al. 2021, Mapp. Police Violence 2022), are 9.6 times as likely as the French to be killed by the police. Importantly, this is true despite the fact that the French victims disproportionately belong to African communities that have long been subject to police mistreatment (du Roy & Simbille 2019, Schneider 2018).

Although the contemporary mistreatment of minorities is a minor contributor to AELP, racism has distinctively and fundamentally shaped American history, society, politics, and policy in ways that leave Americans of all races relatively vulnerable to FPV. First, structurally entrenched racism and resultant associations in the public mind between race and crime purportedly help explain why the United States has adopted and retained unusually harsh or inhumane approaches toward crime and poverty, such as welfare state retrenchment, aggressive drug enforcement, and expanded powers for the police in combatting crime, gangs, and drugs (Alexander 2010, Wacquant 2009). Strategies, policies, and laws that were originally developed and adopted with Black or Latino offenders in mind are inevitably, and sometimes even equitably (Fryer 2019), applied to White suspects, similarly increasing their risk of harsh rather than welfarist approaches. This logic nimbly applies to various posited influences on FPV. For example, reforms that restrict gun ownership, limit the bounds of permissible deadly force, or facilitate holding brutal police accountable are tough sells where most voters visualize police encounters through a prism of racial fear and hostility.

Although space limitations preclude a thorough discussion of patterns and drivers of welfare and crime policy in Western Europe, two important reasons why ethnic tensions and racial oppression have not forged similar policies in Europe bear mention. First, whereas US politicians are empowered to set key welfare policies even in the most racist states and harnessed anti-Black resentment toward welfare retrenchment, West European nationally centralized welfare states largely survived racist and xenophobic attacks because the foreigners who were Europe's most salient ethnic threats were already denied many benefits of national and social citizenship (Isidro & Math 2020). Of course, further restricting migrants' access to benefits has inflicted hardships that have implications for crime and policing. However, whereas racialized crime politics promoted FPV through various policies in the United States (e.g., militarized, extractive policing, easing of concealed-carry restrictions, law enforcement officers' bills of rights) (Carlson 2019), this is improbable in Europe where prosecutors, judges, and law enforcement officials are not elected, elected legislators have less influence over criminal justice matters, and both welfare and policing policy are constricted by international labor and human rights agreements (Garland 2013, Vintila & Lafleur 2020).

Gradations in FPV among focal countries are strikingly consistent with the theorized importance of deeply entrenched ethnoracial divisions and resentments. Only the seven highest FPV countries, four of which have recent histories of authoritarian rule, have roots in relatively recent colonial domination that produced some form of ethnic cleansing. Only the top four FPV countries practiced slavery until the second half of the nineteenth century. The institution of slavery was so massive in Brazil and the United States that the wounds that it inflicted, the benefits it conferred, and the racial hierarchy and ideology that sustained it remained long after abolition and have indelibly shaped the contemporary social and institutional order (Alexander 2010, Waddington et al. 2009). Argentina, Chile, and Venezuela, by contrast, relied much less on slave labor and successfully "whitewashed" their Black populations through deliberate racial mixing and assimilation (Doig-Acuña 2020, Goñi 2021). Hence, ethnoracial oppression, fear, and hostility is not a major contributor to political conflict and police violence in these three nations, unlike in the United States and Brazil (Econ. 2021, Reuters 2021). Whether Canada's and Australia's shared history of brutal oppression of Indigenous populations similarly helps explain their higher FPV rates relative to Europe's may merit investigation. Finally, although multiyear estimations may not substantiate FPV patterns, the two European countries with seemingly relatively high FPV rates also stand out for entrenched ethnic conflicts. France epitomizes the long-standing postcolonial repression of a concentrated ethnic and religious minority, whereas Belgium is similarly troubled and also stands out for cultural cleavages (Flemish/Walloon/Ostbelgien) that impede a centralized policing system and a national egalitarian ethos. Although the treatment of minority

groups is tough to compare across countries given the many intersecting forms and dimensions of inequity and marginalization, various organizations have graded countries on group grievances and group equality in power, rights, and opportunity. To assess countries' treatment of minority groups, I averaged standardized scores on these dimensions from multiple sources into a minority group treatment composite (see **Table 2**). As expected, this measure is strongly correlated with FPV rates (−0.83).

The second reason that racism may be important to AELP is that it helps to sustain the hyper-localized governance of American policing (Hirschfield 2020), whose crucial influence on AELP is further elaborated below. Whereas many countries with enduring localized policing systems such as Belgium, Canada, the United Kingdom, and the Netherlands have gradually increased centralized regulation (Bayley & Stenning 2016, Devroe 2013), local American leaders, including 300 "Constitutional Sheriffs" (Weiss 2021), resist external regulation. In locales where social hierarchies and boundaries are racialized and contested, welfare provisions are meager, and the precarity and centrality of property values, "good" schools, and "safe" neighborhoods provide most White residents a financial, if not emotional, investment in the stratification system (Beck & Goldstein 2018), control over the police is particularly important for favored groups (Bayley & Stenning 2016). For example, selectively aggressive policing can help exclude outsiders and keep disempowered residents "in their place" (Gaston et al. 2021, Hirschfield 2020, Singla et al. 2020). Thus, ceding police control to regional or state authorities unbeholden to local hierarchies could challenge the balance of power and resources within these stratified communities. In countries that centralize policing, local authorities are hardly able to use the provincial or national police to maintain ethnoracial boundaries and hierarchies.

VOLATILE POLICE ENCOUNTERS

Even more often linked to AELP than racism is the elevated risk of seemingly armed and hostile suspects that American police officers face. Owing to permissive gun laws and elevated rates of gun violence, American police encounter far more firearms than police in other developed nations (Zimring 2017). In 2021, 64% of US victims of FPV were allegedly armed with a firearm (Mapp. Police Violence 2022). By contrast, only 25% of FPV victims in Canada in 2000–2017 were armed with real or fake firearms (Nicholson 2018). In France in 2018, only 19% of victims were armed with guns (du Roy & Simbille 2019). Subjects in a mental health crisis, as suggested by their greater mortality when shot by the police (Nix & Shjarback 2021), may be particularly likely to behave in a threatening manner (e.g., refusing to drop weapons). American police plausibly face more of such VEs than European police, given the United States' greater prevalence of mental health problems and suicide, higher economic distress among the mentally ill, and greater difficulties accessing mental healthcare (although France fares worse on accessibility) (Tikkanen et al. 2020).

Some empirical work has documented that American police are more often victimized. Zimring (2017) posited that the relative rarity of FPV in Germany and the United Kingdom reflects the dearth of fatal assaults on police officers. Specifically, he found that this rate in the United States was 25 and 44 times higher than in the United Kingdom and Germany, respectively. Parent (2006, p. 235) similarly compared the United States and Canada noting that the "risk of a police officer being murdered by an assailant is roughly three times greater in the United States than in Canada"—a disparity that is roughly comparable with their FPV gap (Singh 2020). Underscoring the explanatory value of direct threats to the police, the rate of assaults on the police with injury is highest in the West where FPV rates, but not overall homicide rates, are also highest (FBI 2020, Hirschfield 2015). Likewise, Brazil and Venezuela have markedly fewer police officers than the United States, yet 198 Brazilian officers were reportedly killed in 2020 and

291 Venezuelan police were killed in 2016—compared to 46 in the United States in 2020 (Reuters 2021, Tucker & Krishnakumar 2022, Venezuela Investig. Unit 2017).

Although research has apparently not examined the relationship between violence against police and FPV across several countries, one can reasonably speculate that suspects' access to firearms along with gun violence strongly increase the risk that police will confront hostile or suicidal gun-toting civilians (Bierie et al. 2016). Indeed, temporal variation in states' portion of suicides committed with firearms and violent crime rates predicts changes over time in rates of homicides of police officers (Swedler et al. 2015). Concordantly, licensing and reporting requirements for gun owners, which aim to restrict offenders' access to guns, evidently reduce FPSs (Rogna & Nguyen 2022). Such findings may aid in interpreting the extraordinary correlation between FPV and gun homicide rates (0.97)—even stronger than the correlation that Osse & Cano (2017) observed among 11 countries across six continents (0.94). Among European countries only, FPV rates are robustly correlated with gun homicides (0.53) but uncorrelated with overall firearm deaths.

POLICE PERCEPTIONS AND RESPONSES TO VOLATILE ENCOUNTERS

The prevalence of armed suspects and gun violence has profound implications for American policing. It increases not only the risk of encountering grave dangers but, just as importantly, the anticipation and perception of them, realized or not. Although the large majority of American officers never discharge their weapons on the job, most remain hyperalert to the possibility that the need will arise (Morin & Mercer 2017). Consequently, everyday objects (phones) and movements, like reaching into one's pockets, which would rarely cause alarm in Europe, can easily be misconstrued as threats.

Police Culture

Officers' shared ideations about threat and danger become a cognitive schema through which they classify the people, places, and behaviors they encounter. Drawing on his ethnographic observations of three police departments in three regions of the United States, Sierra-Arévalo (2021) depicted how officers assimilate this "danger imperative," starting at the police academy. Recruits watched videos of actual police officers murdered after failing to swiftly interpret and neutralize threats and participated in "kill or be killed" use-of-force simulations. The danger imperative helps explain why "defensive tactics and weapons training make up the largest part of academy curricula" in the United States (Sierra-Arévalo 2021, p. 72). Such military-style training approaches instill grossly inflated expectations about violence while priming officers for situations that will call for deadly force. Others have directly observed such patterns elsewhere (Lynch 2018, Stoughton 2014a).

Academy training acculturates recruits into an occupational culture whose overriding emphasis on officer safety has several implications for AELP. First, a focus on how to manage and neutralize pervasive threats can cast officers as warriors and parts of the community as the enemy (Stoughton 2014a). Although many or most police maintain a strong commitment to service and sacrifice, the danger imperative fosters a more insular orientation as expressed in the "first rule of law enforcement," i.e., the number one goal for each shift is to survive it (Moskos 2008, Stoughton 2014b). Second, a cultural adaptation to danger is to valorize bravery and machismo (Herbert 1998). Such valorization may attract more aggressive personalities to policing and embolden some to put themselves in dangerous situations that disproportionately trigger deadly force such as standing in front of, reaching into, or clinging to vehicles; hot pursuits; and bursting into homes unannounced (Fagan & Campbell 2020, Kirkpatrick et al. 2021, Lynch 2018).

Supporting the danger imperative explanation for AELP, similar dynamics prevail in other high-FPV countries. Comparative focus group research examined how officers in six countries said they would interpret and respond in virtually identical and progressively more volatile scenarios (Waddington et al. 2009), and a dozen partially comparable focus groups were also conducted with New Jersey officers from a single city and from a suburban and a rural county (Barrett et al. 2009). All scenarios involved an encounter with suspicious young men sitting in a vehicle while apparently using marijuana. The New Jersey officers' scenario involved just two men in "a built-up urban area," whereas the other officers encountered several hypothetical suspects in a "rough part of town." New Jersey officers alone were instructed to suspect a stolen car and, perhaps consequently, the urban and suburban officers braced for a violent encounter (taking cover or preparing to draw their guns). The Brazilian and Venezuelan officers' response to their more mundane encounter suggests an even more salient danger imperative. They contemplated coming under attack from not only the suspects but also bystanders, necessitating various precautions (e.g., unholstering their guns). Officers from England, the Netherlands, and Germany, by contrast, largely treated the identical circumstances as routine and expected nonviolence even after the suspects fled and crashed into another vehicle. The escalating levels of resistance and threat from the suspects, which also included verbal abuse and fleeing with an apparent gun after the crash, were perceived as unlikely (nearly unfathomable in the latter case) and preventable through prudent decision-making. Moreover, European officers, including armed British ones, espoused restraint (Rikander 2017), striving to avoid violence or any behavior that could create unnecessary dangers to themselves or others. Whereas all the urban and half of the suburban NJ focus groups said they would respond to the verbal abuse with arrest, these Europeans emphasized persuasion rather than physical confrontation and most opted against hot pursuits because the perceived risks (e.g., injuries and failing to attend to the car-crash victims) outweighed the benefits. German and Australian officers were relatively inclined to pursue the suspects by car and foot but would do so from a distance and expected supervisors to nix their pursuits. Nearly all the American urban and suburban and most of the rural officers said they would conduct a car pursuit, while all would pursue by foot. Although the suspected stolen car may partly explain their greater aggression, it more plausibly evinces a distinctive orientation and training, given that the vehicle was merely suspected rather than confirmed as stolen, and the greater danger posed by guns in the United States should logically increase caution. Indeed, the NJ officers predicted continuing the foot pursuit even after perceiving a handgun.

Given endemic extrajudicial police executions in Brazil and Venezuela (Correa et al. 2022), one may expect their officers to endorse "street justice" in response to the resistance they faced. Although their greater imputations of disrepute and threat to the suspects led to relatively aggressive and forceful postures at each stage, these officers projected surprising restraint with respect to the car pursuit. Unfortunately, their foot pursuit option was not comparable, because their doomed gunman fired upon the officers as he fled. Viewed together, these studies suggest the central international divide is that, whereas the Latin American and US officers expected and often chose circumstances that would make deadly force inevitable or justifiable, the European and Australian officers insistently conjured circumstances and choices that would avert that dreaded outcome. Although these focus group studies are not necessarily generalizable, they are consistent with multisite reports of American police craving chases (Sierra-Arévalo 2021), Chicago police averaging seven foot pursuits daily (about a third of which had a violent outcome), and 25% of Las Vegas police shootings following unnecessary foot chases and 20% involving firing at vehicles (Mower & Haynes 2011, Struett 2021).

Police Training Structures

Although American patrol officers are primed for combat, their everyday duties are closer to social work (Lynch 2018). Outside of affluent communities, police spend much of their time attempting to mitigate disruptions and disputes that systems of social support, social welfare, assisted housing, healthcare, and education are ill-equipped to prevent and manage. Given that American police bear not only more violence than European police but also a wider set of responsibilities for more diverse and distressed populations, one may expect that they receive more extensive training. The opposite is true, and deficiencies in the amount and quality of training, although variable across jurisdictions (Barrett et al. 2009), may help explain AELP. In the United States, police academies provide, on average, just 21 weeks of classroom training (Reaves 2016). The prioritization of policing essentials, like weapons training, defensive tactics, and standard procedures, permits only superficial treatments of cultural diversity, human development, conflict resolution, and recognizing and assisting individuals with various special needs. Reliance on "outdated concepts, such as use-of-force continuums," which entail meeting persistent noncompliance with escalating force like shouting commands and pointing weapons, can have disastrous results with suicidal, disabled, or paranoid individuals (PERF 2016, p. 5).

All focal European and South American countries and Quebec require substantially longer academy or structured apprenticeship training than the United States, with three Nordic countries requiring at least two years of coursework at national police colleges (see **Table 2**) (Hirschfield 2020). Most European nations, in a centralized manner, supplement police training in coercive methods with research-based knowledge and skills that should help officers solve problems peacefully (Hove & Vallès 2020). For example, German recruits acquire "skills in law, intervention, psychology, political science, sociology. . .as well as behavioural training" (Klukkert et al. 2009, p. 188). A sizable minority (45%) attain elevated status, or gehobener Dienst, which requires three additional years of study at a police university. Students in Northern Europe engage with not only recognized policing experts but also scholars from other disciplines (Hove & Vallès 2020). PERF (2016) has argued that the training that officers in places like Scotland receive in communication and negotiation better equips their officers to calm distraught individuals and avert deadly force. Relatedly, greater cultural and social knowledge may help explain why college-educated officers are less likely to use physical force, including deadly force (McElvain & Kposowa 2008, Paoline & Terrill 2007).

Comparisons among focal countries suggest an association between training patterns and FPV. First, European FPV rates correlate strongly (-0.66) with estimated average months of classroom training. Two wealthy Western European countries that often contend with racialized police violence offer among the shortest police training in Europe (Hervey 2018). Belgian police reportedly receive only eight months of course work, whereas the National Police in France attend school for only ten months. Although police in the two highest FPV countries, which are aligned with the military, train longer than American police (one year in Brazil and two in Venezuela), their training is purportedly combat-oriented, modeling brutal responses to any disobedience (Barros 2015) and failing to teach restraint (Waddington et al. 2009). Canada, the developed nation whose FPV rate is closest to the United States', provides only 26 weeks of training for its national police force, the Royal Canadian Mounted Police, and 24 weeks for Toronto police, its largest municipal force, although postsecondary education is required for most Ontario police (Chidley-Hill & Loriggio 2020, RCMP 2020). Australia, with FPV rates comparable to Canada's, tends to provide only slightly longer training.

Prolonged classroom training is not necessary to achieve low FPV rates, however. National police in Spain are educated for only 9.5 months, whereas British officers, until recently, spent

only 6.5 months in the classroom (as part of 2-year programs emphasizing practical training). Chile and Argentina, lower-FPV Latin American countries, feature training durations seemingly on par with the other South American nations.

The Bounds of Permissible Deadly Force

American police are unusual among developed nations with respect to not only their danger obsession and accelerated training "boot camps" but also the discordance between their legal thresholds for the use of deadly force and international human rights standards (Global Hum. Rights Clin. 2020). Because US police face a non-negligible risk of being fired upon, laws and policies make explicit allowance for the unavoidable delay between recognizing an actual deadly threat and effectively neutralizing it (PERF 2016). Thanks to universal cognitive limitations, survival in actual deadly situations may require swiftly interpreting danger signs and responding preemptively. Accordingly, the Supreme Court in *Graham v. Connor* (1989) established that the threshold for constitutionally permissible force is not a probable immediate and grave threat but rather a reasonably perceived one in light of the totality of circumstances (Hirschfield 2020). Police in Australia and Canada also operate under a "reasonable belief" standard for permissible deadly force (Kidd 2017, Scott 2008). Perceived deadly threats in Canada need not even be imminent to justify deadly force. State laws and police department policies set other limitations on deadly force, but they almost uniformly adopt this "reasonable belief" threshold (Glob. Hum. Rights Clin. 2020). Because police are trained and permitted to react violently before threats actually materialize, a substantial portion of the people they "reasonably" killed—even many gun possessors—were killed unnecessarily (Fagan & Campbell 2020, Mower & Haynes 2011, Stoughton 2014b, Zimring 2020). The preemptive force principle can be so sacrosanct that a West Virginia officer was fired for not shooting a suicidal man who refused to drop the gun at his side (Lynch 2018).

Whereas frequent unnecessary deaths are the inevitable (and apparently politically acceptable) cost of lower legal thresholds, many such deaths would have been prohibited in Europe. Many of them would also violate Chile's and Argentina's restrictive deadly force regulations, which are reportedly consistent with human rights standards (Flores et al. 2021, Hum. Rights Watch 2019). European countries, where life-threatening situations requiring split-second decisions are less materially and culturally salient, set stricter standards for the use of deadly force. The most important uniform principles and parameters for deploying deadly force were established at the European Convention on Human Rights in 1953 (Hirschfield 2020). To oversimplify complex international law, the signatories (now numbering 47) to that convention must permit only force that is (*a*) absolutely necessary to achieve a legitimate law enforcement purpose and (*b*) proportionate to both the seriousness of the threat and the importance of the objective. Countries that flout such standards risk international censure, and agents responsible for violations may ultimately answer to the European Court of Human Rights (ECHR). That said, legal scholars allege that national deadly force laws and policies in Europe, especially in France, generally fall short of their treaty obligations (Flores et al. 2021). However, despite the fact that some obviously nondefensive killings (e.g., those deemed necessary to effect an arrest) are technically legal in some focal European countries, such cases are rare, perhaps suggesting the superseding force of international law.

Indeed, the necessity principle has especially profound implications for European policing. An officer uses putatively unnecessary deadly force if she fails to pursue viable alternatives. Consequently, much law, policy development, tactical training, and jurisprudence in Europe centers on officers' duty to avoid the use of deadly force. This duty applies not only to the fateful final moments but also to the chain of upstream interactions (Casey-Maslen 2016). The ECHR has prescribed a duty of precaution, under which officers could be prosecuted for getting too close

to a knife-wielder or a threatening vehicle. American police are similarly instructed to pursue viable less-lethal alternatives, but these mandates rarely have the force of law. Although the behavioral consequences of such divergent laws are difficult to quantify and compare, the policy consequences are not. Whereas police in the United States, Canada, and Australia are trained to shoot only at center mass and to continue shooting until they no longer perceive a threat (Andrew 2020, Breen & Roberts 2022), Denmark, Germany, the Netherlands, Spain, Sweden, and Switzerland prescribe or encourage warning and leg shots (Towle 2017). And whereas German police averaged 1.7 bullets per victim in 2011, a study of officer-involved shootings in major US cities in 2015–2017 reported an average of 7.6 bullets (with no significant variation by suspects' reported possession of weapons) (Grandoni 2012, Grieco & Robbins 2019). Thus, Europe demonstrates stronger commitments to averting deadly outcomes.

The ECHR has recognized that credible threats may be false alarms like fake guns. Deadly force is justifiable in such situations if the imagined threats were based on honest and reasonable beliefs (Norée 2021). However, this allowance for honest mistakes generally does not open the same legal loopholes that it does in the United States. A reasonable belief that an actual object menacing them is a deadly threat is much more exculpatory than a rational prediction or fear that a suspect will reach for a gun, overpower them in a fight, or charge with their knife.

Perhaps the impact of permissible force thresholds and related policies on AELP is most demonstrable with respect to international variation in shooting suspects wielding bladed or blunt objects. Although such weapon-holders make up only 23% of FPV victims in the United States (MPV 2022), our rates of such incidents consistently exceed European nations' total FPV rates. International comparisons of relevant encounters with police are necessary to definitively preclude that this simply reflects more threats from such weapons. But this explanation is especially implausible in countries with high overall rates of knife crime such as the United Kingdom, where police are reportedly "assaulted and injured at nearly four times the rate as their American counterparts" (Kaste 2021). In the 2019–2020 year, 46,265 offenses involved bladed instruments (Shaw 2020). Such offenses exact about 5,000 hospitalizations, 198 homicides, and a knife homicide rate about two-thirds as large as the United States' (NHS England 2019, Off. Natl. Stat. 2022). Thus, police in both countries encounter suspects and suicidal persons with blades. Even if the United Kingdom's knife-wielders, for unknown reasons, are less likely to intentionally or accidentally threaten police, some have (Robinson 2021). Yet their generally unarmed police rarely lose their lives to or kill people wielding weapons other than guns. Zimring (2017), like Hirschfield (2016), argues that these facts, along with similar patterns in Germany, suggest that killing these weapon-holders, however legal, saves very few lives. The same argument holds for the shootings of vehicles that American police, seemingly uniquely (allegedly), often perceive as threatening (Hirschfield 2016, Kirkpatrick et al. 2021).

The influence of divergent laws on AELP should not be overstated, however. Laws articulate only general rules rather than prescriptive guidelines for specific situations. How closely questionable actions fit within contestable interpretations of legal boundaries rarely weighs on distressed officers when they must act immediately. Moreover, as some high-FPV countries like Venezuela illustrate, permitting only deadly force that is strictly necessary may have little preventive value if not buttressed by a clear definition, detailed and sensible policy directives, and effective mechanisms of accountability, as addressed below (Shor et al. 2014, Waddington et al. 2009).

Police Expertise and Governance

Another reason permissive laws alone are an insufficient explanation for AELP is that they, by no means, preclude adopting and enforcing strategies that curb deadly tactics. Approaches that

demonstrably or plausibly reduce lethality include fewer traffic stops, restrictions on when police can chase or fire upon vehicles or fleeing suspects, dispatching well-trained intervention teams to mental crisis calls, and immersive community-oriented policing and racially congruent hiring practices that facilitate communication and sharpen threat discernment (Gaston et al. 2021, Haugh 2016, Lake 2017, Sherman 2018). Police leaders and experts at esteemed organizations like the Police Executive Research Forum and International Association of Chiefs of Police have long proffered practical recommendations, including prohibiting most foot pursuits because they are inherently dangerous (Mower & Haynes 2011). However, seemingly only a minority of America's thousands of police departments earnestly and competently follow these recommendations (Kaminski et al. 2012). Haphazard adoption and implementation reflect yet another fundamental difference between the United States and other developed nations. Centralized American governments, exempting New Jersey and extremely choosy federal civil rights enforcement divisions, lacked the authority to require and enforce best practices for local police departments (Hirschfield 2020, Zimring 2020).

Not only are police departments largely self-regulated with respect to FPV-related policies, but local governments finance them (Hirschfield 2020). Because of large revenue gaps, the departments most sorely in need of reform generally lack the expertise and resources necessary for faithful implementation (Zimring 2020). Accordingly, smaller, rural communities account for a disproportionate share of FPSs (Hirschfield 2015, Sherman 2018). Insufficient resources, oversight, and expert guidance form a structural void filled mainly by professional associations, police foundations, and private companies rather than higher government authorities (Harte & Ulmer 2022). For example, Lexipol sells policy language, whereas Force Science Institute conducts research and training on the use of force. These organizations are embedded in the police profession and culture, and, accordingly, are disinclined to promulgate policies, expertise, or guidance that could compromise officer safety or discretion (Eagly & Schwartz 2022). Moreover, police executives, about 36% of whom lack a four-year degree and only 35% of whom have a graduate degree (Gardiner 2017), and other policing influencers often misinterpret valid or dubious scientific findings. Consequently, much pseudoscience regarding deadly force circulates across the US policing field (Lilienfeld & Landfield 2008). Zimring (2020) decries the organizational processes of applying knowledge to and deriving knowledge from policy and practice as anarchy. Perhaps the most pertinent manifestation of this distinctly North American problem is the countless shootings of people who refused to drop knives or blunt objects but were not charging, because police misapplied the scientific observation that a charging suspect could travel 21 feet and injure someone in 1.5 seconds (Zimring 2020).

Europe's structures of police governance and knowledge management are radically different. Rather than 18,000 separate and unequal policy fiefdoms, very few European (or Latin American) countries have more than a dozen (Bayley & Stenning 2016). The four Nordic countries each feature a unified national police force (Hove & Vallès 2020). Based on the number of autonomous general-purpose police departments per capita (see **Table 2**), the United States is nearly three times as decentralized as its closest rival (Belgium, with 196 police agencies) and more than 100 times as decentralized as most focal countries. Policing in Spain is about as decentralized as in Belgium to the extent that hundreds of municipalities have their own departments (Prieto 2015). Municipal police (*policia local*) make up about 30% of Spain's police. As in Belgium, local police share responsibility for responding to crimes with national police. Aside from the salience of national police agencies, two other aspects of Spanish policing may help explain why Spain is not lumped with the United States as radically decentralized. First, each of Spain's 17 autonomous communities is responsible for training and regulating its local police forces. Unlike most states in the United States, these governments, pursuant to egalitarian aims, strive for uniformity across

towns with respect to training, selection criteria, tactics, equipment, disciplinary procedures, and even pay (Tobajas 2021). Second, although their broad public order function makes these agents, unlike their European counterparts in France and Switzerland (Mouhanna 2019), first responders to many potential VEs, they, unlike their US counterparts, are not functionaries of the legal system. This limits their involvement in investigations and operations that aim to apprehend felons and fugitives.

Because national and provincial governments fund and administer (in all but Belgium) massive, centralized police agencies (and training centers) in Europe, the aforementioned impediments to uniform adoption of use-of-force protocols (and extended police training) in the United States are structurally averted. A national police chief or interior minister can revamp use-of-force policy, training, and research in an entire country, as the French Interior Minister did (and as the New Jersey State Attorney General did) in response to public outcry in 2020 over police killings (Hirschfield 2020). Although the operational autonomy enjoyed by regional police forces in Belgium and the United Kingdom permits inconsistent policy development and implementation (Rappert et al. 2020), they—as shown below—are still more centralized than American police forces.

Moreover, centralized structures of police governance in Europe afford more influence to experts and evidence than do decentralized systems. Whereas many outstanding American researchers and policy experts in the public, nonprofit, and educational sectors widely and assiduously disseminate evidence-based recommendations and find and tout willing partners and demonstration sites, decentralization inherently and severely limits their sphere of influence (Hirschfield 2020). By contrast, in Europe, police colleges and training centers generally operate under the same government authority—typically the Ministry of the Interior—as national police agencies, which facilitates a more orderly and steady exchange of ideas, knowledge, and recommendations between experts, educators, and relatively enlightened executives (Hirschfield 2020).

Wide-reaching, institutionalized channels of elite and expert influence are evident even in the relatively decentralized context of the United Kingdom. The College of Policing consists of policing experts and representatives from the United Kingdom's police executive organizations. Under the Home Office, it sets policies and guidelines for all police agencies and assesses compliance via audits. Although the college prioritizes police over public interests, its policies are purportedly guided by independent "subject matter experts from academia" and "the best available evidence" (Coll. Polic. 2022). FPV-related policies in the United Kingdom are also informed by nonpolice experts in the fields of law, health, and human rights. Specifically, the Independent Advisory Panel on Deaths in Custody provides "independent advice and expertise to the Ministerial Board on Deaths in Custody—with the central aim of preventing deaths in custody" (IAPDC 2022). No cognate bodies advise the US government, despite FPV rates that are approximately 12 times higher.

The drawbacks of Belgium's and Canada's divergently decentralized systems could help explain their nagging issues with police violence. As in the United Kingdom, centralized bodies in Belgium like Committee P supplement local mayoral oversight and can shift FPV-related police training and practices nationwide. However, these bodies exhibit less independence and integration of scholarly expertise than their UK counterparts (Rappert et al. 2020). Moreover, as in the United States, local police chiefs are primarily attuned to local community and official priorities. Consequently, fewer channels and opportunities exist for national policy experts and elites to shape local policy. As Devroe (2013, p. 323) explained, "the political leadership of elected mayors in Belgian municipalities has marginalized the input of scientific expertise to the policy process." Similarly, Canada's local police chiefs enjoy broadly defined operational independence and mostly deferential treatment from under-resourced civilian police services boards beholden to mayors (Bayley & Stenning 2016, Sears 2022).

Because West European governments, in most respects, pursue democratic values like human rights, centralized administrators aim to minimize FPV. But centralizing police authority under authoritarian leaders can produce the opposite results. The Presidents of Brazil and the Philippines, for example, openly emboldened police to kill thousands for political ends, and Venezuela's president reputedly quietly did so to squash dissent (Cumming-Bruce 2019). Generally speaking, police kill frequently in countries where insurgent movements and unrest threaten the political order (Bonner 2009, Sommer & Asal 2019). Although unrest erupts sporadically in the United States and Canada, it logically cannot explain persistently elevated FPV rates. Extrajudicial killings can also become a routine and accepted crime-fighting tactic within security forces that originated in military dictatorships and never adopted democratic structures and norms (González 2021, Walzak et al. 2021).

Monitoring, Enforcement, and Accountability

More directly important to FPV rates than the adoption of laws, policies, and protocols promoting caution and restraint is police adherence to them. The United States' system of local control and community-responsive policing may promote compliance where practices of restraint align with community expectations and demands. That may help explain why cities that experienced Black Lives Matter protests showed sharper reductions in police-perpetrated homicides (Campbell 2021). However, the aforementioned limitations of smaller and poorly resourced departments that impede the adoption of effective policies also hamper the requisite retraining and monitoring systems that bolster compliance.

According to rational choice theory, police compliance should be higher where police fear that any violations of relevant policies or protocols will be detected and exact painful consequences (e.g., disciplinary or court hearings and sanctions, public exposure) (Dharmapala et al. 2022). Even if comparable perceptual deterrence measures were somehow available across countries, any association with FPV would be ambiguous because the variable protocols and policies themselves, rather than the fear of violating them, may explain FPV variation. Similar ambiguities attend to cross-national comparisons in the actual severity and likelihood of negative consequences experienced by the perpetrators of FPV-related behaviors. Low sanction severity and certainty can have wildly different meanings across jurisdictions. In Jurisdiction A, they may indicate that police brutality is not vigorously investigated, prosecuted, or punished, thereby undermining deterrence. But in Jurisdiction B, identically low rates may reflect systems of training, monitoring, and accountability that are so effective that few serious breaches of protocol occur and most investigations are legitimately exculpatory.

That said, striking patterns of convergence have emerged across cross-national assessments of police accountability. Common obstacles to police accountability include investigations impeded by bias, secrecy, misconduct, cursoriness, and mismanagement, along with public tendencies to give violent police the benefit of the doubt (Chevigny 1995, Flores et al. 2021). At the same time, cross-national diversity in the structure and robustness of monitoring and accountability systems exists, which, theoretically at least, should influence the degree of caution and restraint that officers exercise during potential VEs. A potentially crucial source of variation is the social and professional distance and independence separating the monitors and investigators from their targets (Sommer & Asal 2019). One consideration in officers' decisions regarding escalatory or (time permitting) lethal actions is whether their supervisors and other decision-makers will "have their backs." In the small departments that pervade the United States, these superiors are generally personal acquaintances. The increased familiarity likely eases uncertainty and apprehension about their superiors' formal assessments of their decisions. Although closeness to investigators from outside agencies like the district attorney's office or the sheriff (vis a vis municipal officers) is less common, external

agents and their supervisors may have collegial relationships or personal ties with key members of the target department—not to mention common ideological orientations—which could skew their investigations. Local officials could enact policies that ensure more thorough, transparent, and objective investigations. However, hyperlocalism structurally delimits effective accountability. Cost-conscious city or county governments may value accountability but fear the budgetary impact of increased monitoring, transparency, and impartiality, especially with respect to litigation and insurance costs.

Larger and more complex police organizations offer the advantage of greater lateral, vertical, and social distance between investigators and the investigated. Larger departments often provide multiple layers of or parallel reviews (to reduce the risk of cover-ups) and comprise use-of-force review panels and internal affairs divisions with dedicated staff who have fewer social and professional incentives to be lenient. Regardless of the ultimate dispositions of these reviewed cases, the more intense scrutiny and greater social distance these processes offer likely reduces patrol officers' confidence that authorities will have their backs after an unnecessary shooting, thereby introducing deterrence-enhancing ambiguity (Barnum & Nagin 2021).

Exemplifying this vigorous, extended arms-length review process is the New York City Police Department (NYPD), whose most injurious uses of force may be reviewed by the Force Investigation Division and the Use of Force Review Board, whereas civilian complaints of excessive force are investigated by independent civilian investigators (NYPD 2022). The extra scrutiny may help explain why NYPD had the lowest rate of FPV among America's 37 largest cities between 2013 and 2019 (MPV 2022). Whereas the NYPD's distal, rigorous, and adversarial review processes are atypical in the United States, they are not within Europe's enormous police agencies. And, like the NYPD's critics, human rights assessments have criticized many of these investigative and adjudicative processes for a lack of transparency and independence from the organizational hierarchy and policing profession (Rappert et al. 2020). Rappert et al. (2020, p. 5) notably singled out Belgium and France on that score alleging that "the degree of independence raises questions due to ongoing investigative reliance on the personnel and systems of their law enforcement agencies." The closeness between the coroners and the police who investigate police killings in Australia has been similarly criticized by human rights experts (OHCHR 2017). By contrast, police departments in the United Kingdom do not investigate their own police killings. Rather, the civilian-led and -dominated IOPC investigates all deaths in police custody. It is fully independent of any police agency yet has the power to compel participation in misconduct hearings and refer cases for potential prosecution (Rappert et al. 2020).

Furthermore, as mentioned above, officers in the United Kingdom and throughout Europe who are not held accountable in their own countries could face justice in the ECHR. Officers in the high-FPV countries face no such prospect. And a final reason that deterrence may be more effective in Europe bears mention. Their police have more to lose. An employee pushed out of a national police agency for misconduct cannot simply transfer to another short-handed police agency, as troublesome US police often do (Williams 2016). Not only will such officers likely forfeit their law enforcement careers but also—and particularly relevant for inexperienced officers in the lowest-FPV countries—the years they invested in training.

CIVILIAN BEHAVIOR DURING VOLATILE ENCOUNTERS

Given the influence of suspect behavior on violent police behavior, the apparent absence of studies comparing whether suspects in high-FPV countries are more likely to behave in ways that escalate force or signal danger is surprising. This knowledge gap leaves open the unlikely possibility that American knife-wielders more often succumb to police bullets because they are slower to comply

with police commands to freeze and drop their weapons. Greater prevalence of noncompliance and active resistance could also theoretically help explain inordinate US Taser deaths (Ciavaglia et al. 2021), even though Tasers are often the only accessible means for UK police to subdue blade-holders (Busby 2021). Most importantly, defiant tendencies could be especially lethal in America given that certain types of noncompliance (e.g., failing to immediately drop a suspicious object or keep one's hands raised and visible) more often signal mortal danger in the United States, where anyone could possess a handgun, than in all our focal countries (except Brazil and Venezuela), where handguns are much less common. Importantly, many US decedents (as many as 59%) allegedly provoked deadly force via pointing a gun or other assaultive behavior toward the police (Zimring 2017). It is generally impossible to verify whether particular dispositions toward the police or government authority factored into these suspects' hostile actions. But one can reasonably posit that national levels of hostility toward the police or government authority predict national variation in resistance and violence in response to police intervention.

Thus, the salience of noncompliance and violence on the part of American decedents makes it worth theorizing factors that could render American suspects particularly resistant. The first potential basis is America's strong cultural emphasis on self-reliance and limited government (Hirschfield 2015). A 2011 survey found that 58% of Americans said that "the freedom to pursue their life's goals without interference from the state" is more important in society than "that the state play an active role in society as to guarantee that nobody is in need" (Wike 2016). Diametrically opposite patterns were evident in Europe, including the United Kingdom, Germany, France, and Spain. If libertarian commitments are also or especially acute among suspects, they may manifest as resistance to perceived police infringements of cherished rights to property, privacy, bodily integrity, gun possession, and mobility. At the macrolevel, libertarian values may contribute to noncompliance during police encounters by increasing the number of people who, due to the absence of viable community- and state-sponsored alternatives, summon the police in response to a mental health crisis (Hirschfield 2015).

The second plausible factor is group-specific negative feelings toward the police. Poor and marginalized people and communities are, universally, the most likely to be subject to police intervention and abuse. However, the United States' disadvantaged communities may have accumulated more police-specific grievances. These include both historically and culturally rooted collective resentments and personal grudges, because their lives are more frequently derailed by local police departments who, much more so than centralized European police agencies, rely on citations, fees, and asset forfeitures to fund their operations (Singla et al. 2020). Criminological theory and research on procedural justice suggest that more resistance may result. For example, experiencing and witnessing unwarranted street stops undermined police legitimacy and willingness to comply and cooperate with the police (Tyler et al. 2014), and Cleveland police reported more resistance and noncompliance from Black and low-income (i.e., car in poor condition) drivers (Engel et al. 2012).

The importance of collective and group-specific attitudes toward the police receives modest, indirect support from a few observations about other focal countries. First, in 2013, trust in the police within Belgium and France was among the lowest in Europe (Ortiz-Ospina & Roser 2016). Among our focal countries, only Spain registered lower levels than France. Second, group-specific hostilities between the police and immigrant suburbs in France are the closest Western Europe seems to offer to the antagonisms that tarnish police–community relations in parts of the United States (Leduc & Dodman 2020). Hostility and violence toward the police are salient in Venezuela and Brazil but do not factor directly in many extrajudicial executions, which are often targeted attacks. Whether suspects in Chile and Argentina are more compliant than in the United States is a worthy question.

SUMMARY OBSERVATIONS AND CONCLUSIONS

This article aimed to review prior cross-national literature on deadly force in order to integrate, critique, and refine prior explanations of America's relatively lethal police. Despite the global attention and outcry lethal policing has garnered since 2014, directly relevant cross-national literature remains surprisingly sparse. To some extent, this scarcity reflects the limitations of data and method. First, reliable and comparable measures of FPV are difficult to obtain across a sizable number of countries over time. Second, criminological scholarship that relies on nations as the unit of analysis is vulnerable to criticisms that more conventional methods (e.g., interviews and surveys) generally evade. Analyzing nations with unique histories and cultures, regional diversity and autonomy (including in policing), and complex, evolving legal and political structures urges awkward pairings and false equivalencies. Third, explaining AELP is a daunting theoretical and empirical task given the sheer number of FPV-related ways the United States differs from other wealthy countries.

Because this article is primarily oriented toward theory building rather than hypothesis testing, I defer a discussion of how and how well the exploratory comparative analysis herein addresses the first two limitations to a more rigorous and systematic investigation of cross-national FPV variation. The third limitation, however, is as much a theoretical one as it is an empirical one, and the foregoing exploratory analysis is specifically designed to suggest explanations of AELP that deserve priority in the field.

The first set of priority explanations are those that strongly correlate with FPV across (and beyond) focal countries. Consistent with prior research on gun homicides (Osse & Cano 2017) and work emphasizing actual and perceived risks to police officers, rates of gun homicides and FPV are extremely correlated, which suggests that gun homicides merit priority explanation status. That said, gun homicides may be a proxy for another more proximate explanation (e.g., apparently armed and hostile suspects) whose presence is both necessary and sufficient to achieve high FPV rates. The fact that Australia attained high FPV rates in 2019–2020, despite low rates of gun homicide, demonstrates that elevated gun violence is not a necessary explanation for high FPV.

The explanation that best approximates a necessary explanation for high FPV rates is division, conflict, and mistreatment related to minority groups. Consistent with theories of AELP focused on social/political conflict and entrenched racism, a composite of group grievance, political equality, equal rights, and equal opportunity was also highly correlated with FPV. This correlation does not demonstrate the importance of racism, per se, but rather that of entrenched social divisions and political conflicts that threaten to destabilize the state (as in Venezuela) or, in relatively stable democracies like the United States, helped shape the function and operation of the police force (and available welfarist alternatives). If comparative analytics are limited to intracontinental variation, entrenched social divisions also seem to stand out as a necessary explanation for relatively high FPV rates. All the countries that exhibit high FPV rates by their continents' standards—the United States, Venezuela, Brazil, France, and Belgium—are distinguished by their mistreatment of minorities and/or long-standing grievances and turmoil. That said, the cases of Spain and the United Kingdom demonstrate that inequities and grievances are not a sufficient explanation. For the purposes of explaining AELP, it would be useful to disentangle racial oppression from other social conflicts—especially the sorts that lead to deliberate, political deployment of extrajudicial killings. Sampling many more Latin American and Caribbean countries without destabilizing levels of political turmoil could be useful in that connection.

Troublingly, some of the countries where the police appear to encounter more firearms or grievances and mistrust from diverse populations also provide the briefest police training. The overall correlation between training duration and FPV is diluted by Latin American countries

whose militarized police forces receive extensive training. But comparative analysis supports training's importance. All the relatively high-FPV countries provide militarized and/or relatively abbreviated training, suggesting that some aspects of training may be necessary explanations. However, again, the cases of the United Kingdom and Spain suggest that limited classroom training is not a sufficient explanation for high FPV, with the United Kingdom perhaps instilling useful skills during the course of their highly structured and supervised practical training, which, combined with their limited firearm use, suppress lethal encounters.

Comparative logic uncovers a few other factors that deserve theoretical and empirical priority because they may help comprise configurations of sufficient explanations. Although high FPV rates can exist whether a country sets absolute necessity or reasonable belief standards of permissible deadly force, it is noteworthy that all the countries that either adopt the latter standard or consistently fail to enforce their necessity standards (Brazil and Venezuela) have FPV rates that are at least 2.5 times higher than the median. Of course, consistent training and accountability are also tied to the degree of centralization. Centralization, by itself, cannot explain why rates of FPV are much lower in the United States and Canada compared to Brazil and Venezuela or why rates in Chile and Australia are higher than the relatively decentralized systems in Belgium, Spain, and Switzerland. However, the fact that countries with a combination of centralization, enforceable necessity standards, and extended training (Germany and all Nordic countries) uniformly have lower rates than their neighbors suggests that each of these factors deserves additional consideration. The anomalously low rates in relatively decentralized Switzerland could reflect a combination of relatively low gun violence rates (as in Spain), lengthier training on average, and/or relatively harmonious intergroup relations (reflected in high trust in the police) (Ortiz-Ospina & Roser 2016)—a seemingly unique configuration that distinguishes it from markedly higher FPV countries in Europe (Belgium, France, and the United Kingdom) and elsewhere.

Researchers could fruitfully delve into such deviant cases to illuminate how countries (e.g., Chile and Spain) beset with rising crime or insecurity, inadequate public resources, and secretive national police forces with roots in dictatorships still manage to avoid high FPV rates. Similarly, countries with low FPV despite reasonable belief legal thresholds, bitter ethnic divisions, or decentralization—or that have high FPV despite ethnic homogeneity—merit additional investigation.

However, labeling certain countries potentially illuminating "deviant cases" based on this article would be premature. The theoretical importance of particular cases is predicated on valid and generalizable insights from cross-national research on FPV, whether qualitative–comparative in nature or regression-based (cross-sectional and/or longitudinal). The following are foundational elements of future research designed to illuminate key explanations of international variation in FPV:

- Multinational data collection efforts should combine exhaustive sampling (pooling official and media reports) and content analysis designed to achieve maximally comparable measures of FPV across countries and multiple years of rate measurement, which can hopefully reveal patterned international variation that is less sensitive to year-to-year fluctuations.
- With a large sample of countries, research should use established configurational comparative methods (Rihoux & Ragin 2008) to more systematically distinguish high- and low-FPV nations with respect to some of the factors theorized above, including the formal integration of experts and evidence into policy-making, deadly force laws, policies, and accountability systems, racial oppression, and policing resources.
- To address the role of civilian behavior, research should compare suspects in multiple countries (preferably those that converge on key explanatory factors but diverge on FPV rates)

with respect to signs of mental illness, noncompliance with police commands, and physical threats (including from bladed weapons).

- If available data permit, multivariate regression analyses should be conducted to examine the independent influence of various policy- and theoretically relevant predictors of national FPV rates (ideally over time) such as training duration, the prevalence of guns and gun violence, social welfare generosity, trust/confidence in the police, and inequality. The World Values Survey and the International Social Survey Program are potentially rich sources of nation-level attitudinal predictors for such research.

If comparative analyses reveal clusters of factors that provide necessary or sufficient conditions for high police lethality, this will give rise to additional questions. Why does the United States share so many of these factors with other high-FPV nations in the Americas? Do some factors have causal primacy and are some inextricably and reciprocally linked? Do the clusters result from common underlying structural, historical, or political–economic explanations?

Whereas the origins of AELP is a fascinating theoretical puzzle, it is also a pressing matter of public and policy concern. Comparative methods should help inform those discussions. Some police practices around the world such as centralized oversight, unarmed police units, and higher thresholds of legally permissible force are rare within the United States and, therefore, currently, cannot be productively evaluated with inferential methods. Additional cross-national comparative or international research—and more attention to the works highlighted herein—can help steer American use-of-force scholarship beyond the borders of conventional discourse. And perhaps this globally informed scholarship, in turn, can help liberate policy-makers from the fallacies and orthodoxies that have limited their responses to our exceptionally and relentlessly lethal police.

DISCLOSURE STATEMENT

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