14

Empirical Challenges to Studying Terrorism and Homicide

Joseph K. Young and Erin M. Kearns

Introduction

The study of terrorism has bridged multiple scholarly domains. Terrorism is discussed within political science as a form of political violence (Crenshaw 1981) related to civil conflict (Findley and Young 2012) and interstate war (Findley, Piazza, and Young 2012). Terrorism is studied within criminology as a form of criminal violence along with homicide and assault, and under political crime as a form of oppositional action put alongside sedition and treason (J.I. Ross 2006). In scholarly work, it is becoming increasingly more common to see works on terrorism connected to political violence (e.g., Thomas 2014) or political crimes (e.g., Chermak, Freilich, and Suttmoeller 2013), but less so with other forms of crime (e.g., Mullins and Young 2012).[1]

How is studying homicide different from studying terrorism? And how is it similar? The term *terrorism* evokes images of 9/11, the Boston Bombing, or other grizzly attacks committed for an ideological reason. Conversely, the term *homicide* brings to mind shootings on the streets or in one's home, generally for personal reasons. At first glance, these two concepts may not appear connected to one another. LaFree and Dugan (2004), for instance, explore the relationship between terrorism and crime, including homicide, and suggest a long list of affinities and differences. While their investigation is theoretical, this chapter provides an empirical approach.

We use standard modeling approaches from the homicide and terrorism literatures to predict each outcome cross-nationally. Potentially surprising to some who feel these are wholly distinct phenomena, we find more similarities than differences between the factors that predict each.

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In what follows, we discuss the issues with defining, operationalizing, and measuring both terrorism and homicide, and challenges with finding valid and reliable cross-national data on both. We discuss the cross-national study of both terrorism and homicide, including their similarities, differences, and what lessons could be learned from the study of other cross-national forms of political violence. We then use cross-national data to see if models of homicide can predict terrorist attacks and vice versa. We conclude with a discussion of the replication results, research that blends violence types, and future research directions.

Definitions

Given the often-politicized nature of defining terrorism, it is unsurprising that there are many scholarly pieces on the topic (e.g., Weinberg, Pedahzur, and Hirsch-Hoefler 2004; Hoffman 2006; Schmid 2011; Young and Findley 2011). More recently, a scholarly consensus is emerging (Schmid 2012) that terrorism is violence or threats thereof[2] against noncombatants[3] to coerce a target for political[4] goals.[5] Fear generated by the violence is often a component of this definition. Most academic work views terrorism as a tactic that actors use and can be combined with or as a substitute for other tactics (Findley and Young 2012). This is in stark contrast to popular descriptions of terrorism as an ideology or philosophy. The language of the Bush Administration's Global War on Terrorism (GWT) suggests such a belief in terrorism. Since nearly all major religions (Juergensmeyer 2003), and diverse ideologies, such as racism, atheism, environmentalism, communism, and others have produced groups that use the tactic, scholars have generally shied away from conflating tactics with ideology.

Homicide, like most social science concepts, has also been contested. Homicide, however, as a concept and measure has faced less scholarly examination as compared to terrorism. Homicide is a legal category of offenses that involve purposeful infliction of harm that leads to death, which is neither sanctioned by the state nor occurring in conflict (Eisner 2012). Specific legal definitions, however, vary by country (LaFree 1999). Additionally, there are different categories of homicide by country. Lastly, the final charge can vary by jury, plea deal, and other circumstances. The nuance of this is not fully captured in any cross-national data source. Despite these limitations, as LaFree (1999) and others like Archer and Gartner (1984) note, homicide and the data that proxy the concept are the most valid and reliable cross-national crime data to which scholars have access.

Like terrorism, homicide is a socially constructed phenomenon (Brookman 2005). In each case, what constitutes an example of the violence is dependent on time period and context.[6] With all forms of violence, criminal and political, the slippery nature of definition is present. At the level of understanding and theorizing, however, this should not be a call to abandon defining the concept. Instead, as a consensus definition develops, this might indicate scientific progress as the concept is proving useful in explaining some aspect of the empirical world.

Measurement

There are issues with operationalizing and measuring both terrorism and homicide. Some of these issues are similar between the two forms of violence, while others diverge. Categorization allows us to consider appropriate measurement strategies.

There are many ways to divide both terrorism and homicide. Terrorism can be categorical or selective (Goodwin 2006), similarly homicide can be expressive or instrumental (Block and Block 1992). Terrorism can be perpetrated by an individual or by a group (Sambanis 2008), similarly homicide can be perpetrated by individuals or as part of organized crime such as gangs (Rosenfeld, Bray, and Egley 1999). Both homicide and terrorism can involve suicide. Terrorism can also occur domestically or transnationally (Enders, Sandler, and Gaibulloev 2011).[7] Domestic homicide, however, has a different denotation and refers to killing one's partner or relative. Homicide can also occur in the course of committing another crime or as part of a series, to name a few. Additionally, both terrorism and homicide may be spatially concentrated by region (Baller *et al.* 2001; Braithwaite and Li 2007).

Theory

Theoretical explanations of variations in cross-national homicide rates include modernization and social disorganization, relative and absolute deprivation, social and cultural factors, and situational perspectives (Nivette 2011). Explanations of homicide have generally been divided between structural and cultural, though there is a movement to study them in tandem (Pridemore 2002; Trent and Pridemore 2012). Most studies find a negative relationship between homicide and economic development, meaning that economic inequality leads to more homicide (i.e., LaFree 1999; Nivette 2011; Pratt and Godsey 2003). Pridemore (2002), however, finds that this relationship is less consistent than social disorganization as a predictor of the spatial distribution of homicides rates. Additionally, Pratt and Godsey (2003) as well as Rogers and Pridemore (2013) found that greater social support and protections help to mitigate the relationship between poverty and homicide. In a meta-analysis of homicide, Nivette (2011) found that inequality, decommodification, and a Latin America dummy variable are the strongest cross-national predictors while population, democracy, and economic development were the weakest. Additionally, divorce rates, population growth, female labor force participation, infant mortality, and ethnic heterogeneity were positively associated with homicide rates while social welfare programs, ethnic homogeneity, and modernization were negatively associated with it (Nivette 2011). Other hypothesized factors such as urbanization, unemployment rates, and demographic structure (LaFree 1999) have not been found to predict homicide rates.

LaFree and Dugan (2004) note that terrorism and crime in general are highly relevant to one another. While they discuss the similarities and differences between terrorism and crime, they state that homicide itself is conceptually more dissimilar

to terrorism than other crimes like gang violence and organized crime. Though homicide may be more different than terrorism as compared with other crimes, homicide and terrorism still share a number of similarities. For example, the study of both is inherently interdisciplinary, both are social constructs, there are differences between definitions and how they are applied, both are generally committed by young men, and both damage social trust. Like crime, terrorism may involve organizations and people who are variously committed to the group, may be part of more prolonged violence, and may involve selective target selection. Also like terrorism, there is substantial variation in patterns of homicide across countries. For example, Eisner (2012) found that more violent societies have higher percentages of male homicide victims. Interestingly, some of these countries also have more gang violence (e.g., Honduras) or terrorism (e.g., Sri Lanka).

There is variance in the patterns of both homicide and terrorism across regions and countries. For example, homicide victims in the United States tend to be male. By contrast, in South Africa homicide victims tend to be female whereas serial homicide victims are more male, females seeking employment, or couples attacked together (Salfati *et al.* 2015). Additionally, single homicide victims tend to be someone known to the offender whereas known serial homicide victims are more likely to be people on the margins of society (i.e., sex workers, runways, homeless) who are less likely to be reported missing. Spatial variance in terrorism is most evident in tactics used. For example, suicide attacks are more common in parts of the Middle East while relatively unheard of in the West.

LaFree and Dugan (2004) also offer a number of conceptual differences between terrorism and crime in general. For example, compared to crime in general, terrorism is generally a constellation of other crimes (sometimes including murder), has a broader scope of response, involves a greater desire for attention, generally involves a larger goal than the crime itself, is perpetrated by people who think their actions are altruistic, and are more likely to innovate.

Terrorism has likely been around since at least biblical times (Rapoport 1983), but it has been made easier by modernization, urbanization, and social facilitation (Crenshaw 1981). While some have argued the same for homicide, the data may not support these claims (LaFree 1999).

Strain theory, a general set of arguments about how individual or societal grievance can induce violence, has been used to explain general crime, homicide, and terrorism (Agnew 1992, 2010) suggesting some support for the notion of commonality in explanation for these forms of violence.

How to Differentiate

When is it terrorism and when is it homicide? Consider the cases of the man with alleged affinity for ISIS who beheaded a coworker in Oklahoma in 2014,[8] or the violence in Mexico committed by drug gangs who sometimes are referred to as narco-terrorists. Given the debate over motives and varying definitions of both

homicide and terrorism, it may not be clear how to classify these instances. Additionally, they may not be classified consistently across datasets.

Questions about how different datasets classify and measure events are particularly an issue when studying terrorism. For example, in a recent study comparing Global Terrorism Database (GTD) data to official terrorism data from Turkey, there were many attacks not included in the GTD and a few not included in the official data (Cubucku and Forst 2014). Additionally, terrorism research generally uses count of attacks (Li 2005; Enders, Sandler, and Gaibulloev 2011) whereas homicide research more commonly uses rate of homicides per 100,000 people. Are the results dependent upon these operational choices? What if we measure terrorism as a rate and homicide as a count? Would changing the unit of measurement impact results? Would predictors of terrorism and homicide converge?

Perpetrators and targets of both terrorism and homicide vary. For terrorism, perpetrators can be non-state actors, state actors, or semi-state actors, and can be part of an organization or not (Sambanis 2008). For homicide on the other hand, the offenders are only non-state actors, as being connected with the state would change the classification of the crime.[9] Similar to terrorism, homicide offenders can be part of an organization—such as a gang or organized crime—or can act alone. Targets of violence can differ as well depending on the type of homicide or terrorism. Homicide is often described as either expressive (interpersonal) or instrumental (to achieve a material goal), whereas terrorism is often described as either selective or indiscriminate.

Terrorism is generally thought to speak to a larger audience than just the victim. While this can be the case for some forms of homicide, like those that are gang related, sending a message to a larger audience is usually not a part of homicide. However, terrorism and homicide can have some similar goals such as financial gain. Similarly, both can be either symbolic or strategic. There are also gray zones, such as hate crimes, where it is not always clear how to classify an incident. For both terrorism (Kearns, Conlon, and Young 2014) and homicide, we frequently do not know the identity of the perpetrator(s). If we do not know who perpetrated an attack and why they did it, then how do classify lethal attacks as either homicide or terrorism? This may be particularly the case in domestic or lone-wolf attacks with a low fatality rate.

Cross-National Data

The World Health Organization (WHO) homicide data are probably the most reliable. Homicide data report the number of victims, not the number of events (UNODC 2014). For example, one event with two homicide victims would be recorded as two homicides. This contrasts terrorism data, which is generally reported as the number of events not the number of casualties or fatalities. Only about one-quarter of countries report their statistics, however, and it generally only includes *successful* homicide.[10] A major strength is that these data are disaggregated by victim

age and gender (LaFree 1999). Other data that have been commonly used for cross-national studies of homicide include Interpol and the Comparative Crime Data File (CCDF). As LaFree (1999) discusses, the Interpol data use broad definitions, are largely not validated, many countries do not report, and the data are aggregated so researchers cannot explore within-state variation. The CCDF data, on the other hand, report different variations of homicide and were compiled by academic researchers. More recently, the United Nations Office on Drugs and Crime (UNODC) data have been used more widely. The UNODC data are a combination of primarily two sources: the WHO homicide data based on national mortality statistics and the United Nations Survey of Crime Trends and Operations of Criminal Justice Systems derived from reports of police recorded homicides (Eisner 2012). UNODC also expands the data to include additional contextual factors such as weapon type, relationship between perpetrator and victim, and whether or not the homicide occurred in the context of either gang/organized crime or a robbery.

Within terrorism research, the most commonly used data are the Global Terrorism Database (GTD) (LaFree and Dugan 2007) and the International Terrorism: Attributes of Terror Events data (ITERATE) (Mickolus *et al.* 2003).[11] The GTD defines *terrorism* as "the threatened or actual use of illegal force and violence by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation." According to the codebook,[12] to be included in the GTD, an incident must be intentional, involve violence or the threat of violence, and the perpetrators must not be state actors.[13] Additionally, an incident must meet two of the following three criteria: (1) have a political, economic, religious, or social goal; (2) be intended to coerce, intimidate, or convey a message to a larger audience; and (3) occur outside the perimeter of legitimate warfare activities. The GTD includes both domestic and transnational terrorist incidents. On the other hand, the ITERATE data only include transnational incidents. ITERATE contains two different types of files: quantitatively coded data on international terrorist incidents and a qualitative component (LaFree and Dugan 2004).

By nature, crime data are fraught with issues of validity and reliability due to underreporting and differing definitions. Homicide data are regarded as the most reliable and valid of all cross-national crime data (LaFree 1999), yet there are still plenty of concerns related to its construction and use. While not inherently an issue, homicide data counts the number of victims, not the number of events. As discussed above, this differs from how terrorism data is constructed and may impact empirical comparisons of these two phenomena.

There is little to no cross-national data on the individual perpetrators of either terrorism or homicide. Additionally, there are selection effects with the data that do exist. Most cross-national data on homicide are collected by the states that report, and thus some parts of the world—like Europe—are overrepresented in the sample while other regions are virtually excluded (LaFree 1999). This is particularly problematic for low-income countries and places with higher levels of political conflict and war (Eisner 2012). Political conflict and war may also impact the validity and reliability of terrorism data. In LaFree (1999), Israel had one of the lowest reported

homicide rates, yet it is not clear how much of this is classified as terrorism instead. Similarly, there is some discussion about rates of terrorism and reporting issues. As Eisner (2012) points out, the homicide data from Iraq in 2008 would indicate that it was one of the most peaceful places on earth, which we know not to be the case. At the same time, LaFree (2012) questioned whether terrorism rates in Iraq really spiked in the mid-2000s or if it was just the reporting that spiked due to Western media presence. Taken together, perhaps what would have once been classified as homicide was later being classified as terrorism.

While there are many similarities between cross-national homicide and cross-national terrorism data, there are a few important differences. Terrorism data are coded at the event level so researchers can aggregate up. This allows scholars to have a good deal more information about each event. Homicide data, on the other hand, are generally aggregated already based on the number of victims, not events. As Pridemore (2002) discusses, homicide data should be disaggregated by type. This would allow researchers to provide a more nuanced understanding of variants of homicide. Additionally, homicide data usually only provide a count of incidents for the country-year so we have no information about each event.[14] In comparing the cross-national study of these two forms of violence, what lessons could be learned from the study of other cross-national forms of violence?

Data Analysis

Can similar predictors of each of the violent phenomena explain terrorism and homicide? Pridemore, Chamlin, and Trahan (2008) found that major terrorist attacks (Oklahoma City Bombing and 9/11) did not impact homicide rates. Their study, however, looks at the direct impact of terrorism on homicide in the United States after only just two attacks. In this chapter, we are looking to see if the cross-national predictors of terrorism can also predict homicide rates and vice versa. To do so, we need to collect a core set of predictors and operationalize both terrorism and homicide.

In terrorism research, counts of terrorism events are typically used (Young 2015) to operationalize the concept. In homicide research, on the other hand, it has been more common to use homicide rates.[15] Since population is a consistent predictor of political violence across studies that examine its intensity or development (e.g., Fearon and Laitin 2003; Li 2005; Young and Dugan 2011), using a rate of terrorism—as is common in homicide studies—may help unpack whether rates of terrorism change unrelated to simple increases in population.

We examine counts, as this is the norm in terrorism research, and rates, as this is the norm in homicide research, for both terrorism and homicide. Our aim is to identify what the terrorism literature can learn from the homicide literature, what the homicide literature can learn from the terrorism literature, and where they provide similar results.

Sambanis (2008) used a host of explanatory and control variables to examine the similarities and differences between terrorism and civil war cross-nationally. In this

piece, Sambanis used indicators, such as the level of *democracy*, *GDP* (gross domestic product) *per capita*, *population*, *ethnolinguistic fractionalization*, and *oil dependence*. LaFree and Tseloni (2006) used a number of variables to predict rates of homicide cross-nationally. We will borrow from each of these modeling approaches to examine the differences and affinities.

Like Sambanis (2008), we use a binary measure for *democracy* (1 if Polity IV score is higher than 5, and 0 if not). Democracy can encourage active nonviolent participation in society thus reducing all forms of violence by reducing strain or grievances. By contrast, democracy may lead to either groups being able to mobilize for violence or democracies have a softer hand when it comes to policing thus encouraging violence. In terrorism studies, democracy has been associated with greater likelihood of violence (Eubank and Weinberg 1994), while others demonstrate a more complicated relationship (Li 2005; Young and Dugan 2011). Similarly, democracy has been hypothesized to impact homicide rates in multiple ways (LaFree and Tseloni 2006).

We also use *GDP per capita* (1 if higher than the median for the sample, and 0 if not) from Sambanis's model. Studies of political violence often relate this measure to the capacity of the state (Fearon and Laitin 2003) or the development level of the country. Similarly, this measure could proxy the capacity of the police to reduce homicides. Stronger states should thus be able to deter violence or police it when needed (Hendrix 2010).

Like Sambanis (2008), we also include *ethnolinguistic fractionalization* and *oil dependence* in our models. We take measures of *ethnolinguistic fractionalization* and *oil dependence* from Fearon and Laitin (2003). Ethnolinguistic fractionalization is a measure of how diverse a society is in terms of ethnicity. It is measured as the probability that if you randomly sample two individuals, they are not from the same ethnicity (higher values mean more fractionalization). Where societies are ethnically divided, violence may be more likely. Oil dependence is a measure of fuel export revenue. Using World Bank data, a state is coded as oil dependent if fuel exports are at least one-third of their export revenue in a given year (see Fearon and Laitin 2003 for full discussion of coding). Oil has been linked to violence as it offers opportunities for predation as well as weakens links between the state and society (M. Ross 2006).

Population data are from the World Bank (2008). Most studies of political violence find a positive impact of population on terrorism, civil war, genocide, and other phenomena. This could be because increased populations create more opportunity for violence. It could be that this is an association that exists by definition. More people leads to more violence. As discussed above, we create a rate measure of each dependent variable to deal with this issue. Like LaFree and Tseloni (2006), we also measure *democracy* using the Polity IV scale, the *log of GDP per capita*, the *Gini coefficient*,[16] and dummies for *Eastern Europe*, *Latin America/Caribbean*, and *United States* (see Table 14.1). The Gini coefficient is a common indicator for inequality in society and a potential measure of strain.

LaFree and Tseloni (2006) used World Health Organization data for the percentage of the population in each country-year that was between 15 and 25 years of age. We used

Table 14.1 Homicide models—replication of LaFree and Tseloni (2006).

	Homicide count	*Terrorism count*	*Homicide rate*	*Terrorism rate*
Democracy	−0.12***	−0.23*	0.02	−0.007**
	(0.03)	(0.10)	(0.12)	(0.002)
GDP per capita (log)	0.12	0.10	0.08	0.06
	(0.10)	(0.17)	(1.02)	(0.03)
Percent of population	−0.008	−0.08	0.91	0.003
between 15 and 24	(0.05)	(0.10)	(0.43)	(0.02)
Gini	0.06***	0.03	0.72	−0.0001
	(0.013)	(0.03)	(0.15)	(0.005)
Eastern Europe	−2.07***	−1.54***	5.45	−0.12
	(0.23)	(0.41)	(2.20)	(0.08)
Latin American/	−0.66*	−1.63*	6.42	−0.15
Caribbean	(0.30)	(0.70)	(2.87)	(0.11)
United States	1.20	−1.22	2.23	−0.28
	(1.21)	(1.65)	(12.71)	(0.39)
Constant	5.95***	4.03	−39.91	−0.26
	(1.50)	(2.99)	(15.38)	(0.55)
N	273	165	284	165

*p < 0.05; **p < 0.01; ***p < 0.001.
Count models use negative binomial regression. Rate models use ordinary least squares regression. Standard errors are in parentheses below coefficient estimates. Source: LaFree and Tseloni (2006). Reproduced with permission of SAGE Publications.

census data that gave the percentage between 15 and 24. We know that criminal (Piquero 2008) and violent (Urdal 2006) actions are most often the domain of young people.

To reiterate, we are taking the models used by Sambanis (2008) and LaFree and Tseloni (2006) then swapping the dependent variables to see if a model for terrorism can be used to explain homicide and vice versa. Traditionally, models of terrorism have used counts as the outcome variable whereas models of homicide use rates. For this reason, we are using both counts and rates of terrorism and homicide per country-year from 2000 to 2012. Models in which the dependent variable is expressed as a count will be estimated using negative binomial regression. Models in which the dependent variable is expressed as a rate per unit population will be estimated using ordinary least squares regression. Terrorism data come from the GTD whereas homicide data come from UNODC, which is a created using WHO data and UN survey data as discussion above.

As shown in Table 14.2, we replicate Sambanis's (2008) model of civil war and terrorism to predict homicide and terrorism using both count and rate for each dependent variable. This generated some expected results, and some interesting ones that are worth further exploration.

In the terrorism literature, there is an assumption that higher levels of democracy will lead to better reporting of attacks and thus more attacks. What we see

Table 14.2 Terrorism models—replication of Sambanis (2008).

	Homicide count	*Terrorism count*	*Homicide rate*	*Terrorism rate*
High democracy	0.89***	0.29*	18.51***	0.05
	(0.13)	(0.12)	(1.78)	(0.03)
High GDP per	−0.85***	−0.30*	−9.05***	−0.05
capita	(0.09)	(0.13)	(1.31)	(0.03)
Population (log)	0.89***	0.64***	−0.38	−0.03**
	(0.03)	(0.05)	(0.38)	(0.01)
Ethnolinguistic	0.04	−0.46	5.44*	−0.09
fractionalization	(0.16)	(0.28)	(2.41)	(0.06)
Oil dependence	0.64***	1.08***	8.26***	0.17***
	(0.14)	(0.15)	(1.99)	(0.04)
Constant	−8.23***	−7.60***	7.94	0.60***
	(0.50)	(0.73)	(6.54)	(0.16)
N	1034	872	1058	872

*p < 0.05; **p < 0.01; ***p < 0.001.
Count models use negative binomial regression. Rate models use ordinary least squares regression. Standard errors are in parentheses below coefficient estimates.

here, however, is that higher democracy is positively associated with terrorism counts, but it is not significant for predicting the terrorism rate. States with higher levels of democracy experience a larger number of terrorism events, but this relationship disappears when controlling for population. In sum, how we measure the dependent variable impacts our inference about the relationship between democracy and terrorism. For homicide, on the other hand, higher levels of democracy are positively associated for both counts and rates. States with higher levels of democracy experience a larger number of homicides and more homicides when controlling for population, which may be reflective of reporting and not the actual phenomenon. This underreporting bias is a pernicious problem well known to terrorism researchers (Drakos and Gofas 2006). Creating a rate of the variable may help somewhat. However, issues of underreporting might be just as problematic—or even worse—for homicide studies since homicide is more likely to go undetected.

Similarly, states with a high GDP have lower homicide counts and rates. Yet, for terrorism, states with a high GDP have lower terrorism counts, but not terrorism rates. States with greater capacity may have fewer homicides, but the results for terrorism are less conclusive. States with greater ethnolinguistic fractionalization have higher homicide rates only. Other independent variables seem unrelated to this measure.

Unsurprisingly, states with larger populations have higher counts of both terrorism and homicide. Interestingly though, states with larger populations have lower terrorism rates. This is a bit of evidence to suggest that using a rate may be a more theoretically useful measure as counts may go up just because actors have more opportunity for violence.

Table 14.3 Homicide models—replication of LaFree and Tseloni (2006).

	Homicide count	*Terrorism count*	*Homicide rate*	*Terrorism rate*
Democracy	0.005	−0.02***	0.17*	−0.004**
	(0.01)	(0.004)	(0.07)	(0.001)
GDP per capita (log)	−0.47***	−0.04	0.28	0.04**
	(0.06)	(0.06)	(0.39)	(0.01)
Percent of population	0.09***	0.003	1.02***	0.01*
between 15 and 24	(0.03)	(0.04)	(0.18)	(0.007)
Eastern Europe	−1.29***	−0.91***	2.55	−0.03
	(0.13)	(0.20)	(0.93)	(0.05)
Latin American/	0.79***	−0.89***	14.92***	−0.11*
Caribbean	(0.14)	(0.19)	(0.96)	(0.05)
United States	3.52***	−0.18	3.01	−0.17
	(0.47)	(0.54)	(3.31)	(0.13)
Constant	9.82***	3.85***	−16.52**	−0.43
	(0.84)	(1.04)	(6.16)	(0.22)
N	726	605	744	605

*p < 0.05; **p < 0.01; ***p < 0.001.
Count models use negative binomial regression. Rate models use ordinary least squares regression. Standard errors are in parentheses below coefficient estimates. Source: LaFree and Tseloni (2006). Reproduced with permission of SAGE Publications.

From the study of political violence, it should not be surprising that oil dependent states experience more terrorism as it is positively related to human rights violations (DeMeritt and Young 2013), international conflict (Colgan 2010), and a host of other unpleasant human problems (Karl 1997). This is true regardless of whether terrorism is a count or rate. There is not much discussion of oil dependence in the homicide literature. Yet, oil dependent states have higher homicide rates and counts. As Karl (1997) notes, oil can create a host of unfortunate problems that range from political to interpersonal violence. Venezuela, Nigeria, and other petro-states are unfortunately currently familiar with these problems.

In sum, from Sambanis's (2008) model, there are a number of similarities in the cross-national study of both homicide and terrorism. For both terrorism and homicide, it is not clear whether a higher level of democracy is linked to more violence or just more reporting of these phenomena. Oil dependence is also a positive predictor of both terrorism and homicide regardless of whether they are measured as a count or a rate. The impact of population depends on whether the dependent variable is a count or rate, and suggests that rate is more theoretically useful. State capacity may reduce homicide, yet the relationship to terrorism is still unclear. Similarly, ethnolinguistic fractionalization is only predictive of higher homicide rates.

As shown in Table 14.3, we replicate LaFree and Tseloni's (2006) cross-national model of homicide. We model homicide and terrorism using both counts and rates for each dependent variable. In this model, more democratic states had lower levels of terrorism, regardless of whether we used a count or rate. This contrasts with the

Sambanis model, where more democratic states had higher counts of terrorism. In Sambanis's model, high democracy is binary whereas LaFree and Tseloni use Polity IV scores. This sensitivity to measurement calls into question the widely held notion that democracies seem to have more terrorism because there is better reporting. More democratic states had higher rates of homicide only. These inconsistent results suggest that more extensive conceptual and measurement work is needed to relate democracy to both forms of violence.

When using the log of GDP in LaFree and Tseloni's model as compared to a binary measure for high GDP from Sambanis, only the relationship with homicide counts remains negative, and the relationship with terrorism rates becomes significant and positive. Higher logged GDP is associated with a higher count of homicide, but a lower rate of terrorism. This is consistent with the homicide literature where poverty is strongly associated with homicide. The finding for terrorism and GDP is more interesting and may indicate a nonlinear relationship. States with a larger percentage of the population between 15 and 24 have a higher homicide rate and count, and a higher terrorism rate. For homicide, this result is unsurprising as such violence is more common than terrorism and generally associated with young men. Since the measure for youth is also a proportion, it is not surprising that this is associated with the terrorism rate only.

Eastern Europe countries have a lower count of both terrorism and homicide, yet this relationship disappeared for rate models. Latin America and Caribbean countries have a higher homicide count and rate, and a lower terrorism count and rate, which is what we would expect. The United States has a higher homicide count, as we would also expect. These results map onto expectations. Eastern European countries experience lower numbers of homicide and terrorism, and also have smaller populations so the count models alone are significant. Latin American and Caribbean countries experience high homicide and low terrorism. In the United States, there are a high number of homicides but also a large population.

In sum, from LaFree and Tseloni's (2006) model, there are a number of differences and inconsistencies in the cross-national study of both homicide and terrorism. The relationship between democracy and both terrorism and homicide varies depending on how the outcome variable is measured. GDP, percentage of the population between 15 and 24, and the Latin America/Caribbean dummy variable are strong predictors of homicide, but inconsistent for terrorism. The Eastern European dummy is inconsistent by type of outcome variable measurement, and the United States dummy only predicts homicide count.

For homicide, factors like gun ownership may impact national rates, but other factors may be more likely to impact at the local level. For terrorism, political rights tend to be significant (Sambanis 2004), which could partially account for homicide as well. For both homicide and terrorism, national-level income statistics in cross-country studies do not capture local-level phenomena. These macrolevel data do not tell the story of variation within a country. Future work should consider looking at these same phenomena at a more microlevel, possibly within single countries to begin the comparison.

Conclusion

Studies of homicides and terrorism are often done in isolation of each other. We find here though that there are some consistencies in predictions of each of these variables warranting future work investigating these affinities. Recent work has shown that terrorism and civil war are related and often co-occur at highly disaggregated micro-levels (Findley and Young 2012). Future work could examine spatial clustering of both terrorism and homicides and see if there are positive spatial correlations between the two, whether they co-occur or whether they follow similar temporal patterns.

Our work here has been largely empirical. Future work could examine whether there are stronger theoretical reasons to keep these phenomena together or apart. While some view one form of violence (terrorism) as political and the other as not (homicide), current violence in Latin America is challenging this conventional wisdom. Brutal homicides in Mexico, for example, seem to cross these boundaries and beg for a unified explanation.

Accordingly, we did not disaggregate terrorism nor homicides into smaller pieces. It may well be that domestic terrorism and say hate crime homicides are similar, but not to transnational terrorism. Domestic intimate partner homicides may be similar to suicide terrorism, but not to gang homicides. Beyond looking at a more micro-level, these data could also be disaggregated into types to examine these sorts of questions.

While ours is an initial foray into thinking about these questions, we hope that future work will develop and refine our understanding of these kinds of violence. That task will be made easier if we can find commonalities and differences that aid in our understanding of each of these destructive elements of human society.

Notes

1 Terrorism studies as a field has its own journals, which are interdisciplinary and include articles on geography to narrative to politics. See, for example, *Terrorism and Political Violence*, *Studies in Conflict and Terrorism*, *Critical Studies on Terrorism*, *Perspectives on Terrorism*, and *Behavioral Sciences of Terrorism and Political Aggression*.

2 Adding threats include events like hijacking that may not include actual violence, but the threat is key for coercion.

3 This may be the most contentious element of defining terrorism. Can attacks on the military be considered terrorism? The Beirut Marine barracks bombing in 1983 is a prime example. United States and French military forces were killed by a group calling itself the Islamic Jihad. These soldiers were killed to coerce this multinational force to leave Lebanon. The military were not engaged in active combat at the moment of the attack. Moreover, they were serving a peacekeeping role in the country. Most scholars would consider this act terrorism. The term noncombatant then allows us separate events such as this with killing a soldier in theater by a nonuniformed militant, more accurately described as an insurgent or guerrilla attack. The purpose of this attack is to degrade the opponent's forces not to terrorize.

4 Political means that one person or group is trying to influence another. Those political goals then can have religious, ideological, ethnic, or other motivations but at the end they are political as the goals are relational not individual.
5 This consensus is emerging in more empirical approaches to the study of terrorism. Critical scholars are the most vocal dissenters regarding this consensus. See, for example, Jackson, Breen Smyth, and Gunning (2009).
6 See Hoffman (2006: 32–33) for a discussion related to this point on terrorism.
7 Domestic terrorism often refers to the fact that the victim and the perpetrator are from the same country or the action is against a national of the territory where the act took place. Transnational terrorism often refers to either an attack that has a perpetrator attacking a person of a different nationality or an attack spilling across national boundaries (Sandler *et al.* 1983).
8 Available online at http://www.cnn.com/2014/09/29/justice/oklahoma-beheading-suspect/.
9 The United Nations Office on Drugs and Crime (UNODC) data only count intentional nonconflict deaths. State-sponsored or state-ordered killings can occur outside of conflict (i.e., capital punishment, death squads such as those in El Salvador or Brazil, genocide). However, these state-sponsored forms of killing are conceptually distinct from homicide and thus would likely not be picked up in these official data.
10 See Neapolitan (1998) for a discussion about including attempts as well as successful homicide, the issues with adjusting the data, and the differing importance of explanatory variables using adjusted and unadjusted data. We are not suggesting that cross-national homicide data should include attempts, as this would add additional uncertainty and error. We bring up this distinction between homicide and terrorism data to illustrate the differences in how these two phenomena are counted and analyzed.
11 Other databases include TWEED, which has just data from Western Europe, the Rand/MIPT data, and the now defunct US State Department sponsored WITS database.
12 Available online at http://www.start.umd.edu/gtd/downloads/Codebook.pdf (START 2012).
13 We state above that the definition of terrorism does not *have to* include perpetrators being non-state actors. States can and do use this tactic in pursuance of their goals. The GTD, however, requires that perpetrators be non-state actors for inclusion in their data. All other publically available data also exclude states from their collected events. The Political Terror Scale (http://www.politicalterrorscale.org) is a notable exception, but it only collects yearly information on state terror and for highly aggregated actions.
14 The recent European Homicide Monitor project is one notable exception. This dataset includes detailed case information for solved and unsolved homicides starting with Finland, Sweden, and the Netherlands and the goal expand to all of Europe. See Granath *et al.* (2011) for a full discussion of these data.
15 More recently, criminologists have started to utilize count models as well (i.e., Kubrin's (2003) study of homicide counts, and Osgood's (2000) study of juvenile robbery arrest counts).
16 We estimated the models with and without the Gini coefficient. When including Gini, the sample size drops dramatically (605 to 165 for terrorism, 726 and 744 to 273 and 284 for homicide count and rate, respectively). Thus, we report the models without the Gini coefficient and acknowledge that keeping Gini in the models changes the results dramatically. See Table 14.1.

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