A comparison of political violence by left-wing, right-wing and Islamist extremists in the United States and the world

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Abstract

Although political violence has been perpetrated on behalf of a wide range of political ideologies it is unclear whether there are systematic differences between ideologies in the use of violence to pursue a political cause. Prior research on this topic is scarce and mostly restricted to self-reported measures or less extreme forms of political aggression. Moreover, it has generally focused on respondents in western countries and has been limited to either comparisons of the supporters of left-wing and right-wing causes or examinations of only Islamist extremism. In this research we address these gaps by comparing the use of political violence by left-wing, right-wing, and Islamist extremists in the United States and worldwide using two unique datasets that cover real-world examples of politically motivated, violent behaviors. Across both datasets, we find that radical acts perpetrated by individuals associated with left-wing causes are less likely to be violent. In the United States we found no difference between the level of violence perpetrated by right-wing and Islamist extremists. However, differences in violence emerged on the global level with Islamist extremists being more likely than right-wing extremists to engage in more violent acts.

Keywords: violence, ideology, terrorism

Significance statement

Following the 9/11 attacks there were large increases in Islamist terrorism driven especially by al-Qaeda, ISIS and their affiliates. More recently, we see an upsurge in right-wing political extremism in countries around the world. Despite the growing research literature generated by these developments, the issue of whether there are systematic differences between political ideologies in the use of violence remains unsettled. We address these gaps by comparing the use of political violence by left-wing, right-wing, and Islamist extremists in the United States and worldwide using two unique datasets. In both datasets we find that individuals and attacks associated with left-wing causes are less likely to be violent. In the worldwide dataset specifically we find that compared to other ideologies, Islamist extremists engaged in deadlier attacks.

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Historically speaking, political violence has been perpetrated on behalf of a wide range of political ideologies (1,2). This could suggest that the willingness to use violence for a cause is independent of the ideological content and can be expected across the ideological spectrum given sufficiently high levels of conflict. At the same time, individuals espousing different ideological views have been found to differ with regard to personality profiles (3), cognitive functioning (4), social motives (5), values (6) and moral beliefs (7). Given that these factors may predispose individuals to aggression, we might expect similar differences between ideologies with regard to the use of political violence. However, despite the growing interest in research on political ideology (8), very few studies have directly examined patterns of violent behavior across the ideological spectrum. In this research we address this gap by comparing the use of political violence by left-wing, right-wing, and Islamist extremists in the United States and worldwide using two unique datasets that cover real-world examples of politically motivated, violent behaviors.

Left-Wing versus Right-Wing Extremism

Of these three ideologies, most prior research has contrasted those committed to right-wing and left-wing causes. Much of this research suggests that compared to left-wing extremists, right-wing extremists may be more likely to engage in politically motivated violence. In comparison to left-wing supporters, right-wing individuals are more often characterized by closed-mindedness and dogmatism (9) and heightened need for order, structure, and cognitive closure (5). Because such characteristics have been found to increase ingroup bias and lead to

greater outgroup hostility (10), violence for a cause may be more likely among proponents of right-wing ideologies. In contrast, in comparison to their right-wing counterparts, left-wing individuals score higher on openness to new experiences, cognitive complexity, and tolerance of uncertainty (5). They are also less likely to support social dominance (11), which could lead to their overall lower likelihood to use violence against adversaries. In line with this reasoning, some studies have demonstrated an empathy gap between liberals and conservatives (12). Finally, according to various conceptualizations and operationalizations of right-wing authoritarianism (RWA; 13-15), aggressive tendencies constitute an inherent component of this construct, with people high in RWA being more hostile toward others who violate norms than those low in RWA. A recent meta-analysis supports this conclusion, revealing a positive relationship between right-wing ideology and aggressive attitudes and behaviors (16). However, the study did not focus solely on politicized contexts and included only milder forms of aggression.

Moreover, not all prior studies support the idea of ideological asymmetry. For instance, one study (17) found no difference between liberals and conservatives in empathy they felt toward their political opponents. Further, although aggression is indeed included in classic conceptualizations of RWA, there have been suggestions that RWA is not necessarily a unidimensional construct and that relations between its subdimensions and social outcomes may be more complex (18). Thus, it is unclear to what extent right-wing authoritarians support or engage in non-normative violence such as terrorism. At the same time, recent work on left-wing authoritarianism suggests that left-wing beliefs could also be related to support for aggression when aggressive acts are aimed at social hierarchy (19).

More generally, there is growing evidence suggesting that extremists representing different ideologies might have more in common than has been assumed (20). For example, extreme liberals and conservatives both represent the social world in a similar, simplistic way, which distinguishes both groups from more moderate individuals (21). In studies of behavior in conflict, one study (22) found that both right and left-wing extremists used more negative and angrier language than moderates did. Finally, a strong inclination to defend one's beliefs against worldview-violating groups and a low tolerance for such groups has been identified for both liberals and conservatives (23). Taken together, this research suggests that left-wing and right-wing extremists could be equally likely to use violence to pursue their ideological goals.

In short, the findings regarding differences between ideological groups in their tendency to use political violence are inconsistent and mostly indirect. Another important limitation comes from the fact that these studies have investigated predominantly mainstream samples and, in most cases, relied on attitudinal measures of aggressive tendencies. Research that compares perpetrators of real-world acts of political violence on behalf of different ideological causes is rare. It is thus unclear to what extent current literature on political ideology generalizes to such extreme cases. Finally, extant research that does examine differences between right and left-wing individuals has been limited mostly to Western samples and has generally omitted other ideological groups such as those representing Islamist extremism.

Islamist versus Right and Left-Wing Extremism

While there are examples of religious terrorism from a number of denominations, in recent years Islamist terrorism has far and away received the most research and policy attention (24, 25). It has been especially singled out for deadly attacks against military and government installations and also for the promotion of martyrdom through suicide attacks (26, 27).

Moreover, while religiously charged motives for terrorist attacks were common in the past, a unique feature of its most recent form is that the religious aspect of the movement has become the dominant one (28 - 30). Some researchers (31-33) consider this to be one of the main reasons for the increasing lethality of terrorism in the past two decades.

Although claims for the greater lethality of religiously motivated terrorism are common, there have been few empirical tests of the argument. One of the rare studies that investigated this claim showed that Islamist terrorist organizations had significantly higher casualty rates than other types of terrorist organizations, controlling for a wide variety of rival explanations (34). However, this study also found that when affiliation with the al-Qaeda network was controlled for, Islamist groups were only slightly more likely than non-Islamist groups to commit high casualty terrorist attacks. While useful, this study was limited to 7 years, excluded domestic attacks, and was completed before the meteoric rise of several major Islamist groups since 2005, including ISIS, Boko Haram, and al-Shabaab.

Prior theorizing could suggest that Islamist extremists may be more similar in their willingness to use violence to right than left-wing extremists. Islamist extremism seems to share with far-right extremism such key traits as fundamentalism, closed-mindedness, authoritarianism, and dogmatism (32, 35). In line with this reasoning, (35) refers to Islamist extremists as “devoted actors” and notes the rigidity and closed mindedness of adherents. (36) concludes that Muslim countries are markedly more authoritarian than non-Muslim countries, even controlling for a range of potentially influential factors. However, while theoretically plausible, direct evidence testing the hypothesis about similarity between Islamist and other ideological groups in their use of violence is missing.

Overview of the Current Research

The purpose of this research is to determine whether there are significant differences in the propensity to use violence to further a political cause linked to ideological commitment to right-wing, left-wing, and Islamist extremism. By including relevant cases representing violent acts committed by the adherents of each of these three ideologies, we are able to compare directly these groups. Extending past research in the area, we explore these issues using two very different databases. Study 1 extends prior individual-level work examining cases of politically motivated violent and non-violent behavior by individuals radicalized in the United States while controlling for possible individual-level covariates. Study 2 assesses the lethality of attacks perpetrated in the name of different ideological causes using an incident-based dataset of terrorist attacks worldwide, accounting for relevant country-level covariates. Even though both datasets are publicly open and a few studies (37, 38) have used the variables that are of focal interest to the current paper as control variables, to our knowledge no published research directly investigated the specific question that we are focusing on. Datasets and code for both studies are available at https://osf.io/5rhwf/?view_only=None.

Study 1: Individuals Radicalized in the United States

Dataset. The Profiles of Individual Radicalization in the United States (PIRUS) dataset is a cross-sectional set of individual-level data on persons who radicalized primarily within the United States and have been linked to an ideologically motivated violent or non-violent crime (37, 38). Attributes are coded based on publicly available court documents, newspaper accounts, and published sources. To be included in the database, individuals have to meet at least one of the following criteria: arrested or indicted for illegal ideologically motivated offenses, killed because of their ideological activities, identified as a current or former member of a designated terrorist organization, or associated with an organization whose leader or founder was indicted

for violent ideologically motivated offenses. Individuals meeting one or more of these criteria must also have been radicalized (primarily or entirely) within the United States and have a clear link between their criminal behavior and their ideological motive. Data were coded in several stages involving three waves of coding by a team of research assistants and full-time staff. The codebook is available at (39).

Our sample from the PIRUS data consists of 1,563 individuals with a history of involvement in domestic extremist activities identified as affiliated with either a left-wing, right-wing, or Islamist ideological milieu. We include individuals whose public exposure occurred between 1948 and 2018. As shown in Table 1, among these individuals over half got into the database because of violent behavior, nearly 90% were male, and the mean age of exposure was 35 y.

Measures.

Ideology. Our primary predictor was a mutually exclusive categorical variable and included individuals who were identified as committed to Islamist, right-wing, or left-wing causes. Examples of groups supporting Islamist ideology included al-Qaeda and Hezbollah; examples of groups supporting right-wing ideology included the Ku Klux Klan and the National Alliance; and examples of groups supporting left-wing ideology included the Animal Liberation Front and the Weather Underground. Right-wing supporters represented 59%, left-wing 23%, and Islamist 18% of the sample. We created two dummy-coded variables with far-right ideology as the reference category.

Violence. Our main outcome variable was whether the act committed by an individual was violent. The dataset codes as violent cases where there was strong evidence that individuals were conspiring to kill or injure even if they failed to do so. Cases were coded as non-violent where it

was clear from source documents that individuals did not intend to harm others, including acts of vandalism, illegal protest, fraud, and property destruction where the perpetrators took measures to ensure that no one was injured or killed.

Control variables. Based on past research on individual characteristics associated with political violence, we included the following variables as controls: age, sex, ethnicity, immigration background, education, previous violent criminal history, and military history. To account for the dynamic nature of extremist behavior in the United States, we controlled for the decade of exposure for the individual counting up from the 1960s to the 2010s based on the date the individual's activity first came to public attention (e.g., the time of the attack or the arrest). Given that only 7 cases were dated earlier than 1960 we combined them with cases from the 1960s in one group.

We present detailed by-ideology descriptive statistics for covariates in SI Appendix. Compared to other individuals, left-wing radicals were more likely to be female, married, and highly educated; Islamist extremists were more likely to be have immigrated to the United States and nonwhite; and right-wing extremists were more likely to be older and have past criminal or military experience. Regarding timing of the activity, left-wing radicals were more frequent in the 1940s to the 1970s, whereas right-wing and Islamist extremists were more frequent in the most recent decades.

Table 1. Descriptive statistics (study 1)

Variable	*Categories*	*Overall n*	*Missing values*	*% / mean (SD)*
Violence		1,563	-	
	Violent			54.4%
	Non-violent			45.6%
Ideology		1,563	-	
	Islamist			17.6%
	Left-wing			23.4%
	Right-wing			59%
Education		595	968	
	Up to high school			39.7%
	College or vocational education (some or complete degree)			47.7%
	Post-graduate education (some or complete degree)			12.6%
Marital status		909	654	
	Yes			35.9%
	No			64.1%
Immigration background		1,500	63	
	Yes			8.1%
	No			91.9%
Military experience		1,033	530	
	Yes			16.8%
	No			83.2%
Sex		1,558	-	
	Male			89.1%
	Female			10.9%

Age		1,507	56	34.62 (13.55)
Ethnicity (white)		1,434	124	
	Yes			76.1%
	No			23.9%
Previous violent criminal experience		919	644	
	Yes			22.3%
	No			77.7%
Decades		1,563	-	
	1940s-1960s			7.1%
	1970s			8.1%
	1980s			9.2%
	1990s			15%
	2000s			24.4%
	2010s			36.2%

Results. To examine the relationship between ideology and violent extremist behavior we performed multivariate logistic regression. In light of the substantial proportion of missing data on some of our control variables, we used multivariate imputation through chained equations (MICE) to replace missing data (40, 41). Following the MICE procedure, logistic regression was performed on the pooled datasets of imputed values to provide efficient and unbiased estimates. The results of these analyses, pooled across all datasets, are presented in Table 2.

When compared to individuals associated with a right-wing ideology, individuals adhering to a left-wing ideology had 68% lower odds of engaging in violent (vs. non-violent) radical behavior (b = -1.15, SE = 0.13, odds ratio [OR] = 0.32, $p < .001$). On the other hand, the difference between individuals motivated by Islamist and right-wing causes was not significant (b = 0.05, SE = 0.14, OR = 1.05, $p = .747$). Expressed in terms of predicted probabilities, the probability of left-wing violent attack was 0.33, that of right-wing violent attack was 0.61, and that of Islamist violent attack was 0.62. These findings remained robust after we controlled for demographic variables (sex, age, education, minority status, immigration status), prior criminal experiences, military experience, and decade in which the perpetrator entered the database. Of the control variables, immigrants were less likely to engage in violence. Those who had a prior violent criminal record were more likely to engage in violence. Further, older individuals and those identified as white were less likely to engage in violence in this sample. Finally, when contrasted with the 2010s, persons whose date of exposure was in the 1970s and 1980s were more likely to be violent and those in the 2000s were less likely.

Table 2. Logistic regression model (study 1)

	Model without covariates			Model with covariates		
	b	SE	OR	*b*	SE	OR
(Intercept)	0.44	0.07	1.55***	0.99	0.44	2.69*
Left-wing ideology	-1.15	0.13	0.32***	-1.70	0.21	0.18***
Islamist ideology	0.05	0.14	1.05	0.44	0.28	1.56
Education (College or vocational education)				-0.08	0.52	0.92
Education (Postgraduate education)				-0.56	0.47	0.57
Marital status				-0.30	0.19	0.74
Immigration background				-0.68	0.29	0.51*
Military experience				-0.10	0.21	0.91
Sex (male)				0.18	0.24	1.20
Age				-0.01	0.01	0.99
Ethnicity (white)				-0.43	0.21	0.65*
Previous violent criminal experience				1.08	0.21	2.95***
1960s				0.56	0.31	1.74
1970s				1.39	0.30	4.01***
1980s				0.94	0.28	2.56**
1990s				0.24	0.22	1.27
2000s				-0.50	0.18	0.60**

* $p < .05$; ** $p < .01$; *** $p < .001$

Note: The reference category for the model with covariates is an individual who identified as right-wing, achieved a high school or less education (Education 1), was not married, not an immigrant, did not have any military experience, did not engage in any previous criminal violence, and their exposure event occurred in the 2010's. Significance here is determined using a two-tailed t-test based upon 50 pooled samples with the multivariate imputation through chained equations method.

In short, our individual-level examination found that among radicalized individuals in the United States, those adhering to a left-wing ideology were markedly less likely to engage in violent ideologically motivated acts when compared to the right-wing cases. By contrast, we found no such difference between Islamist and right-wing cases. Reanalyzing the data with left-wing individuals being a reference category showed that the difference between Islamist and left-wing individuals was also significant (SI Appendix).

In Study 2 we tested a similar hypothesis using a different dataset: worldwide incident-level terrorism data from the Global Terrorism Database (GTD; 42), which provides information on domestic and international terrorist attacks around the world.

Study 2: Global Terrorism Database

Dataset. Terrorism in the GTD is defined as "the threatened or actual use of illegal force and violence by non-state actors to attain a political, economic, religious, or social goal through fear, coercion, or intimidation" (42). Early versions of the GTD were based mostly on individual news outlets. At present, the data collection process begins with a universe of two million articles published daily worldwide in order to identify the subset of articles that describe terrorist attacks. The final database is compiled by a staff of 15-20 analysts and student interns. The codebook is available at (43).

Of the 182,848 cases included in the GTD from 1970 to 2017, 55% identified the perpetrator group (N = 100,019).[1] We further limited the sample of events to those committed by perpetrators responsible for at least five or more attacks during the observation period (N = 95,969). This allowed us to eliminate less important and more short-lived perpetrators. Using these methods, we were able to identify 935 separate perpetrator groups.

When a perpetrator was identified, it was either a specific extremist group (e.g., al-Qaeda) or a generic label such as "Islamist extremists," "left-wing militants," or "anti-abortion extremists." In order to assign the ideological leaning for the former type of attacks, we took the names of the perpetrator groups and matched them with a battery of armed, nonstate group databases and terrorist group encyclopedias that assign an ideological motivation to terrorist and other militant organizations. For the latter type of attacks, we assigned a perpetrator ideology that best fit the generic description, such as Islamist, left-wing, or right-wing respectively for the

examples given. In order to test our hypotheses, we kept events assigned uniquely to far-right, far-left or Islamist perpetrators, which resulted in 523 uniquely assigned groups and 71,979 terrorist attacks.

Excluded from the sample are terrorist attacks perpetrated by nationalist-separatist groups and criminal organizations. Nationalist-separatist terrorist perpetrators include actors such as the Irish Republican Army (IRA). Such perpetrators adhere to a secular ideology that is motivated by the desire for political autonomy or independence by an ethnic or sectarian group within a country. Although we exclude perpetrators that are motivated solely by nationalist-separatist objectives, some of the left-wing and Islamist perpetrators that are included in our sample do also have a nationalist-separatist ideology, such as the Kurdish Worker's Party (PKK) in Turkey. We also excluded a small number of cases in the GTD that were committed by criminal organizations: for example, attacks by the Mafia that fit the GTD definition of terrorism but are ambiguous with regard to ideological classification. The final list of groups with assigned ideologies is included in SI. Due to missing values on the outcome variable (N = 5,702) and on covariates, the eventual sample size is lower and differs between analyses (as indicated in Tables 3 and 4).

Measures.

Ideology. We used similar definitions for Islamist, left-wing and right-wing ideological perpetrators as in Study 1. For Study 2, 49% of the incidents in our sample were perpetrated by Islamist terrorists such as the Islamic State or Hezbollah, 45% were perpetrated by left-wing terrorist groups such as the Shining Path of Peru or the Naxalite movement of India, and 6% were perpetrated by right-wing terrorist groups such as the Ku Klux Klan in the United States or

the Ranvir Sena in India. Again, we constructed two dichotomous variables with right-wing ideology as the reference category.

Violence. To measure the lethality of attacks, we used a variable indicating the number of people killed. The distribution of this variable was strongly right-skewed, and 46% of all attacks yielded zero fatalities. Given the extreme skewness of distributions and the fact that in many cases the exact number of people killed could be expected to be estimated with error, we created a categorical index indicating whether in a given event anyone was killed (1 = yes vs. 0 = no). Our primary analyses are conducted on this indicator. However, we also performed an analysis of the original continuous variable using a zero-inflated negative binomial model.

Control variables. We controlled for a set of variables shown by prior research (33, 42) to be important determinants of deadlier attacks in the GTD. These include wider political, economic, and social characteristics of the venue country in which the attack transpires. Our control variables included measures of the intensity of overall domestic civil conflict within the venue country of the attack[2], the degree of ethnic fractionalization in the venue country[3], the venue country's level of economic development (measured as logged gross domestic product) and total logged population[4]. Our assumption was that terrorist attacks in countries suffering from severe civil conflicts (44), that are ethnically fractionalized (45) and that have large populations are more likely to include attacks that kill more people. We also assumed that terrorist attacks in countries with high levels of economic development are likely to be lower in fatalities. To address time-related idiosyncrasies that might affect attack fatalities we first included dichotomous measures of each decade (e.g., 1970s, 1980s). However, because the model failed to converge, we simplified our control for time period by recoding it to a variable with three categories (before 1990, 1990 to 2010, and post-2010).

Results. Given that events were nested in groups and countries but groups were not necessarily nested in countries, to test our hypotheses we used a cross-classified multilevel model (46) with random intercepts for a country and a group. Because the outcome variable was dichotomous we fit a generalized linear mixed-effects model implemented in lme4 (47). We first fitted an unconditional model and calculated the intraclass correlations (ICC) from the model. It showed that 29% of the variance in violence was attributable to the group and 13% of the variance was attributable to the country where the attack occurred. Next, we added ideology of the perpetrator as a predictor. The results (before including any covariates) are presented in Table 3. They show that ideology was significantly related to the odds that the attack would result in fatalities. In comparison to terrorist attacks committed by right-wing perpetrators terrorist attacks by Islamist perpetrators had 131% higher odds of resulting in fatalities ($b = 0.84$, SE = 0.20, OR = 2.31, $p < .001$) and attacks by left-wing extremists had 45% lower odds of resulting in fatalities ($b = -0.61$, SE = 0.18, OR = 0.55, $p < .001$). Expressed in terms of predicted probabilities, the probability of left-wing attack resulting in fatalities was 0.23, that of right-wing attack was 0.35, and that of Islamist attack was 0.55.

The results of the analyses on the original count variable using a zero-inflated negative binomial model were also consistent with the results of the logistic regression on the transformed variable (see Table 3, model 3, last column). If the perpetrator was left-wing, then the number of fatalities was lower in comparison to a right-wing perpetrator ($b = -0.50$, SE = 0.21, $p = .019$) but if the attack was conducted by Islamist extremists, then the number of fatalities was higher ($b = 1.36$, SE = 0.23, $p < .001$). At the same time, compared to right-wing attacks, left-wing attacks were more likely to result in zero fatalities ($b = 0.58$, SE = 0.16, $p < .001$), as shown by the zero-

inflation model. The difference between right-wing and Islamist extremists was not significant in this case.

In Table 4 we reexamined the effects of ideology, controlling for the covariates (centered before the analysis). Because the model that included all the covariates failed to converge, we ran several models in which we separately controlled for the presence of conflict and fractionalization (model 1), logged population and gross domestic product (GDP, model 2), and time of the attack (model 3). The results for the ideology variables remained the same, and several of the controls were significant (Table 4). As expected, the odds of fatalities were higher when the attack occurred in the context of a civil conflict and ethnic fractionalization but were lower in wealthier countries. Attacks that occurred in both periods before the 2010s were more likely to result in fatalities than attacks from the most recent decade.

As mentioned earlier, some groups in our dataset represented generic entities (e.g., "anarchists") where we were unable to assign a specific group name. As a robustness check, we reran our analysis on the subset of attacks where we could identify specific groups by name. The results and conclusions, which are presented in detail in SI, remain the same.

Table 3. Multilevel logistic regression model of fatalities in GTD without covariates (study 2)

	Model 1 Logistic regression (total sample)		Model 2 Logistic regression (subsample with non-missing values on covariates)		Model 3 Zero-inflated negative binomial model	
					Conditional model	Zero-inflation model
	b	*OR*	*b*	*OR*	*b*	*b*
Intercept	-0.63	0.53***	-0.56	0.57**	-0.36	-2.08
Left-wing ideology	-0.61	0.55***	-0.65	0.52***	-0.50*	0.58***
Islamist ideology	0.84	2.31***	0.76	2.14***	1.36***	-17.85
Random part						
Intercept variance (groups)	1.48		1.48		1.87	
Intercept variance (countries)	0.56		0.67		0.95	
Deviance	78609.8		72229.8		261169.2	
Observations	N: 66,276 Groups: 523 Countries:127		N: 60,606 Groups: 520 Countries:115		N: 66,276 Groups: 523 Countries: 127	

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 4. Multilevel logistic regression model of fatalities in GTD with covariates (study 2)

	Logistic regression (controlling for conflict)		Logistic regression (controlling for population and GDP)		Logistic regression (controlling for time period)	
	b	OR	*b*	OR	*b*	OR
Intercept	-0.20	0.82	-0.42	0.66*	-1.08	0.34***
Left-wing ideology	-0.62	0.54**	-0.67	0.51***	-0.65	0.52***
Islamist ideology	0.74	2.10***	0.93	2.54***	1.02	2.77***
Civil conflict	0.16	1.17***				
Ethnic fractionalization	0.81	2.25*				
Population, log			-0.05	0.95		
GDP, log			-0.65	0.52***		
Pre-1990 vs. post-2010					0.87	2.39***
1990-2010 vs. post-2010					0.33	1.38***
Random part						
Intercept variance (groups)	1.44		1.45		1.46	
Intercept variance (countries)	0.51		0.50		0.75	
Deviance	72045.6		71562.3		71810.6	
Observations	N: 60,606 Groups: 520 Countries: 115		N: 60,606 Groups: 520 Countries: 115		N: 60,606 Groups: 520 Countries: 115	

* $p < .05$; ** $p < .01$; *** $p < .001$

Discussion

The goal of the present study was to examine the relationship between ideology and political violence. On the basis of existing research, we expected that perpetrators motivated by right-wing causes would be more likely to engage in violence than those representing left-wing causes. However, given that past research was scarce and mostly restricted to self-reported measures or less extreme forms of political aggression, the exact pattern of this relationship was uncertain. Moreover, there was suggestive evidence that extremists representing different ideologies could be in fact more similar than different. Finally, most past research has either focused on Western social contexts and compared the supporters of left-wing and right-wing causes or has examined only Islamist extremism. A lack of direct comparison between these three different ideologies was a gap that we aimed to address.

The findings from two studies, characterized by very different scopes and units of analysis, provide substantial support for conclusions about the relationship between ideology and the use of politically motivated violence. First, data on extremists in the United States showed that left-wing radicals were less likely to use violence than right-wing and Islamist radicals. Second, using worldwide data we found that in comparison to right-wing and Islamists groups, attacks motivated by left-wing groups were less deadly. These substantive conclusions were not affected by the inclusion of a set of control variables. Thus, the main findings appear to be robust across levels of analysis (i.e., individuals, groups) and geographical scope of the data.

Our results are in line with past research showing that conservative ideology - represented in our datasets by both right-wing and Islamist causes - is positively related to violent political behavior. These results support the view that left-wing and right-wing extremists are not equivalent when it comes to the use of violence (48, see also [49] for related findings on

the victims of hate crimes in the United States). Whereas our findings are not inconsistent with the idea that individuals espousing different ideologies may feel equally negative toward worldview-threatening others (50), they suggest that the social consequences of extreme right-wing hostility may be more harmful than those caused by the far-left (see [50] for a similar point).

At the same time, available data leaves us agnostic as to the exact causal process between these variables. It could be that characteristics of individuals who are drawn to right-wing causes predispose them to greater aggressiveness. Such a hypothesis would be in line with past research on the psychological make-up of conservatives versus liberals (5). It is also possible that it is rather the characteristics of the cause that drive the use of violence. For example, it could be that right-wing causes are associated with stronger moral convictions or a greater sense of threat among their followers, which makes their adherents willing to use more extreme measures to attain their cause. Finally, the content of the political cause (e.g., hierarchy-enhancing vs. hierarchy-attenuating) might interact with individual characteristics (e.g., value of equality vs. dominance) and result in varying levels of violence. Future research could investigate the exact mechanisms behind the relationships identified in our data.

In terms of violent behavior, those supporting an Islamist ideology were significantly more violent than the left-wing perpetrators both in the United States and in the worldwide analysis. However, comparisons for Islamist and right-wing cases differed for the two samples. For the US sample, we found no significant difference in propensity to use violence for those professing Islamist or right-wing ideologies. By contrast, for the worldwide sample, Islamist attacks produced significantly more fatalities than those produced by right-wing as well as left-wing perpetrators. One possible explanation for the discrepancy between the two studies is that

right-wing perpetrators were much more common in the US sample than in the worldwide sample. The greater prevalence of right-wing extremism in the US sample but lower in the worldwide sample adds complexity to our overall conclusions as it could suggest that different mechanisms may account for whether a certain type of extremism occurs in a given sociopolitical context and its lethality once it appears.

The inclusion of all three types of extremism allowed us to see, to our knowledge for the first time, how they compare with regard to political violence. Future research could investigate in greater depth the psychological similarities and differences between Islamist extremists and the other two ideological groups. Past research noted that both right-wing and Islamist violent extremists are members of reactionary movements that frame their causes in terms of defending rigid, traditional hierarchies and often have a goal of establishing exclusive and homogenous communities (51-52). In further support of similarities between these two groups, one study (53) observed that a notable proportion of jihadist group recruits had educational backgrounds suggesting a motivation to seek order and reinforce rigid, traditional hierarchies. These features suggest that Islamist extremism is not orthogonal to the left-right distinction that is typically studied in the psychological literature but rather that it overlaps with the right-wing end of the ideological spectrum. Future research using more diverse samples could provide empirical verification of this idea. On the other hand, a more fine-grained analysis of different political causes within the broad, left-right ideological dimension could help to identify the features of the causes that are more likely to be associated with violence.

Despite the fact that we are unable to speak to the mechanism accounting for the relationship that we found, we believe that the uniqueness of this study lies in the type of data that we use. Unlike most prior research examining propensity to violence for different

ideological categories within the moderate samples, our research looks at actual violent behaviors. As such, it extends existing literature by providing insights into the extreme ends of ideological commitment. Further comparison between extreme and moderate actors representing different ideologies as well as different types of political commitment (e.g., epistemic commitment to extreme beliefs vs. behavioral commitment to violent actions) would help to obtain a more detailed picture of the relationship between ideology and aggression.

Nonetheless, both datasets examined include relatively large numbers of cases over nearly a half century. We were able to control for a wide variety of variables associated in the past with ideological violence and found similar results from two studies with very different units of analysis. Interestingly, in both datasets we observe a decrease of left-wing extremism over time and an increase of right-wing and Islamist extremism. Whereas controlling for the time of the violent act did not change the pattern of our results it would be important for future research to understand the sources of these temporal dynamics.

It is important to acknowledge several limitations of our data. First, both databases suffer from the missing data problems that are a common feature of open-source studies of political extremism (54, 55). Important information may simply be unavailable in print and electronic open-source media. In addition, it is likely that the cases with the least missing data are those most prominently covered by news agencies. The question is how this problem could affect the conclusions of our research. One implication could be that both PIRUS and GTD are more likely to include cases that are more, rather than less serious in terms of fatalities. Given our focus on differences in the use of violence across ideological categories, this characteristic would be most threatening to our results if the media treated newsworthiness differently across ideological categories. Given the attention generated by Islamist terrorism in recent years (56), we think the

most likely possibility here is that our data are skewed by a tendency for the media to be more vigilant in reporting Islamist compared to right- or left-wing attacks. Given that more-violent attacks are likely to have drawn attention regardless, it is possible that additional scrutiny for Islamist attacks would bias the results downwards and make these cases appear overall less violent.

Second, while the GTD purports to include every terrorist attack around the world, PIRUS represents a sample of known political extremists in the United States. Although the PIRUS research team endeavors to include a random sample of available cases, PIRUS quite likely overrepresents recent cases when more complete open source information has survived. This suggests that the US sample may be more likely to exclude nonviolent cases that are older since they were less likely to be recorded. However, this may actually strengthen our results for the US analysis because left-wing cases were more common in the 1970s while right-wing cases have been more common in later decades.

Finally, we limited our GTD analysis to persons killed and excluded those injured, which is also included in the GTD. By contrast, the PIRUS data includes as violent all cases where there is evidence that the perpetrator planned to achieve a violent outcome, whether this resulted in fatalities or not. Future research could investigate ideological differences in the type of harm that is caused by extremists. For instance, the extent to which they target symbolic objects or cause material destruction could also differ between the groups and these differences do not necessarily need to follow the pattern identified in our study. Although we present the analyses for the number of people injured in SI and our substantive conclusions remain similar when we combine both, we also explain why – due to the type of data and their coding - we treat fatalities as a more reliable variable than injuries.

Despite the limitations of our data, the finding that right-wing and Islamist cases are more violent than left-wing cases may have special relevance for the current time period. The surge in Islamist terrorism following the 9/11 attacks, driven by groups like al-Qaeda and ISIS, has been widely perceived as resulting in the increased deadliness of worldwide terrorism attacks. More recently, there is growing evidence of a rising tide of populist-driven right-wing extremism in countries around the world (57, 58). Nearly 50 years ago, Jenkins (59) noted that "terrorists want a lot of people watching and a lot of people listening, and not a lot of people dead." Three decades later Jenkins (60) modified his original observation, and made it more in keeping with our results from right-wing and Islamist extremists: "many of today's terrorists want a lot of people watching and a lot of people dead."

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[1] We chose 2017 as the cutoff because at the time of the project we did not have assigned ideological profiles of perpetrators after 2017.

[2] Source: Major Incidents of Political Violence (MEPV) database, variable "civtot." Center for Systemic Peace. Codebook and data available online at: http://www.systemicpeace.org/inscrdata.html. "Civtot" is an ordinal measure of the intensity of all civil conflict within a country per year. Due to the time of the project the datasets with covariates were combined with GTD in 2017 with information available at that time.

[3] Source: Quality of Government database, variable "fe_etfra." Fearon and Laitin measure of ethnic fractionalization within country. Codebook and data available online at: https://www.gu.se/en/quality-government. "Fe_etfra" is a measure of likelihood that any two randomly-drawn people within a country are not members of the same ethnic group.

[4] Source for both national population and GDP: United Nations National Accounts. Codebook and data available online at: https://unstats.un.org/unsd/snaama/.