How a Botched Study Fooled the World About the U.S. Share of Mass Public Shootings:

U.S. Rate is Lower than Global Average

John R. Lott, Jr.
President
Crime Prevention Research Center

July 1, 2018

Revised
August 30, 2018

* I would like to thank Lloyd Cohen, James Alan Fox, Tim Groseclose, Robert Hansen, Gary Kleck, Tom Kovandzic, Joyce Lee Malcolm, Craig Newmark, Scott Masten, Paul Rubin, and Mike Weisser for providing helpful comments. I appreciate able help compiling these cases from Rujun Wang, Roger Lott, Andrzej Zdzitowiecki, and Daniel Beets. Rujun and Roger also helped out in many other ways with this research.

Executive Summary

A paper on mass public shootings by Adam Lankford (2016) has received massive national and international media attention, getting coverage in the New York Times, the Wall Street Journal, plus hundreds of other news outlets spanning at least 35 different countries. Lankford's claim was that over the 47 years from 1966 to 2012, an enormous amount of the world's mass public shooters -- 31% -- occurred in the United States. Lankford attributed this to America's gun ownership.

Lankford claims to have "complete" data on such shooters in 171 countries. However, because he has neither identified the cases nor their location nor even a complete description on how he put the cases together, it is impossible to replicate his findings.

It is particularly important that Lankford share his data because of the extreme difficulty in finding mass shooting cases in remote parts of the world going back to 1966. Lack of media coverage could easily lead to under-counting of foreign mass shootings, which would falsely lead to the conclusion that the U.S. has such a large share.

Lankford's study reported that from 1966 to 2012, there were 90 public mass shooters in the United States and 202 in the rest of world. We find that Lankford's data represent a gross undercount of foreign attacks. Our list contains 1,448 attacks and at least 3,081 shooters outside the United States over just the last 15 years of the period that Lankford examined. We find at least *fifteen times* more mass public shooters than Lankford in less than a third the number of years.

Coding these events sometimes involves subjectivity. But even when we use coding choices that are most charitable to Lankford, his 31 percent estimate of the US's share of world mass public shooters is cut by over 95 percent. By our count, the US makes up less than 1.43% of the mass public shooters, 2.11% of their murders, and 2.88% of their attacks. All these are much less than the US's 4.6% share of the world population. Attacks in the US are not only less frequent than other countries, they are also much less deadly on average.

Given the massive U.S. and international media attention Lankford's work has received, his unwillingness to provide even the most basic information to other researchers raises real concerns about Lankford's motives.

> *"I say this every time we've got one of these mass shootings: This just doesn't happen in other countries."* **–Obama, news conference at COP21 climate conference in Paris, Dec. 1, 2015**
>
> *"The one thing we do know is that we have a pattern now of mass shootings in this country that has no parallel anywhere else in the world."* **–President Obama, interview that aired on CBS Evening News, Dec. 2, 2015**
>
> *"You don't see murder on this kind of scale, with this kind of frequency, in any other advanced nation on Earth."* **– President Obama, speech at U.S. Conference of Mayors, June 19, 2015**

I. Introduction

To justify the claims in these and other similar quotes, President Obama's administration cited a then unpublished paper by criminologist Adam Lankford.[1] The study received coverage in hundreds of news stories, with international news coverage in at least 35 different countries. Purporting to cover all mass public shootings around the world from 1966 to 2012, Lankford claimed that the United States had 31% of public mass shooters despite having less than 5% of the world population.[2]

Major media outlets gave Lankford's claims uncritical coverage. Headlines accepted his findings as fact.

—*The Wall Street Journal*: "U.S. Leads World in Mass Shootings."[3]

—*The Wall Street Journal (subheading)*: "U.S. produces more mass shootings than other countries."[4]

—*The Los Angeles Times*: "Why the U.S. is No. 1—in mass shootings."[5]

—*Time magazine*: "Why the US has 31% of the World's Mass Shootings."[6]

— *Newsweek magazine*: "Study Sees Mass Shootings as 'Exceptionally American Problem'."[7]

—*Washington Post*: "American exceptionalism and the 'exceptionally American' problem of mass shootings."[8]

—*CNN*: "Why the U.S. has the most mass shootings."[9]

— *Sunday Morning Herald* (Australia): "Why the U.S. is No. 1 in Mass Shootings."[10]

Similar coverage was given that year by *USA Today*, *PBS Newshour*, NPR, *ABC Evening News*, Fox News, and many hundreds of other outlets.[11] The stories were carried by various wire services and covered by media outlets across the country. Many have covered the claim repeatedly. Coverage wasn't just limited to the US or even the English-speaking world. It has received extensive attention in countries such as Australia, Austria, Argentina, Armenia, Brazil, Canada, China, Colombia, Costa Rica, Denmark, Egypt, Finland, France, Germany, Hungary, India, Indonesia, Iran, Ireland, Japan, Malaysia, Mexico, Peru, Portugal, Russia, Slovenia, South Africa, Spain, Sweden, Turkey, UK, Venezuela, Vietnam, and Cuba.[12]

The research keeps being cited. In the last nine months, the New York Times has twice republished the same diagrams which show that the United States stands alone in its number of guns and mass public shootings.[13] Since October 2017, USA Today has re-cited this research on three more occasions.[14] Just this year, it has received coverage on television and twice in the Washington Post as well as Chicago Tribune, Houston Chronicle, Politifact, and Psychology Today.[15] The Washington Post referred to it this year as Lankford's "famous study."[16]

Since then, the media has continually used Lankford's numbers and asserted that the US has an incredibly high rate of mass public shootings. Often, this is attributed to America's high gun ownership rate.

Unfortunately, Lankford has not published or released his list of mass public shootings or even the number of cases by country or by year. He has even refused repeated requests to provide a list of the news sources or languages he used to compile his list of cases. This prevents anyone from doing even a rough check of his data. Only a couple news stories interviewed any researcher who might be critical of Lankford's claims.

In his original paper, Lankford gave information on the number of cases for only four countries: France, Philippines, Russia, and Yemen. Just for the New York Times, Lankford provided information on the number of attacks by country, which was used to publish a series of graphs. But the observations in the Times' graphs were labeled for only those same four countries.[17]

For less developed parts of the world such as Africa or Latin America, it can be very difficult to obtain news stories from even a decade or so ago. It is downright impossible to obtain news stories on all of the cases of four or more people being killed in the 1960s or 1970s. So instead of looking at all 47 years that Lankford claims to study, we examined the last 15 years of his period of study: 1998 to 2012.

Lankford claims to have found 292 mass public shooters over the 47 years from 1966 to 2012, with 90 occurring in the United States and 202 in the rest of world. Over just the last 15 years of that period, we find 1,491 cases — 43 in the United States

and 1,448 everywhere else.

In the following discussion we show how sensitive the results are to decisions on what to include in the count. But even the most generous assumptions produce results show that mass public shooters, shootings, and murders from these attacks are very rare in the US compared to the rest of the world.

II. The History of Trying to Obtain Lankford's Data

> "No qualified scholar would accept work by a researcher who could not, or would not, even explain exactly how he measured his most important variable [mass shootings]."
> -- Professor Gary Kleck, Florida State University, discussing Lankford's research with Fox News in 2016[18]

> "Any research that seeks to influence the public debate on this topic, as this research clearly does, should be required to make their data available so that other researchers can confirm their findings."
> - Professor Robert Reed, replication editor at the journal Public Finance Review, discussing Lankford's research with Fox News in 2016[19]

When Lankford's research was receiving international news coverage in the summer of 2015, he repeatedly turned down my requests to see his paper. On December 1, 2015, the *Washington Post*'s Michelle Lee wrote me: "I do have a copy but [Lankford] asked that I not distribute it or post it online before it's formally published. You can contact him and request, maybe now that his study is being discussed he might be more open to share?" I contacted Lankford both before and after Lee's email — he declined to provide either the paper or his data.[20]

Reporters might not realize how incredibly unusual it is for academics not to share their papers with other academics. There are many websites set up to facilitate doing just that (e.g., the Social Science Research Network and ResearchGate.net). Academics not only benefit from feedback, but they also want other academics to read their papers and cite them in future research. More citations help people earn tenure and get promoted. In decades of being in academia, I have never seen an academic refuse to hand out a paper that was already accepted for publication.

I finally obtained a copy of Lankford's paper when it was published at the end of January 2016 — more than five months after it originally started getting media attention. Incredibly, even after his paper was published, Lankford still refused to let me look at his list of foreign mass public shootings. His published study did not even contain descriptive statistics on the number of mass public shootings in foreign countries or the number of attacks by year. In an email exchange where I requested information on how he had obtained his list of foreign cases, he emailed me that he

could assure me that "it was a lot of work."[21]

Indeed, Lankford won't even give journalists any specific details on how he collected his sample.[22] There is no information in his paper on his use of different databases, foreign languages, or search terms. In his paper, he claims "complete data were available for 171 countries, and they averaged 1.7 public mass shooters per country from 1966 to 2012." Gathering this data on foreign cases from the 1960s, 1970s, 1980s, and 1990s that involved as few as 4 deaths seems like an impossible task for many places around the world.

There are lots of other countries around the world that clearly have higher death rates from mass public shootings than does the US. But these cases are very hard to find for countries outside the United States or Europe, especially in earlier years. Take the Solomon Islands, for example. Despite the islands' 1999 ban on handguns and virtually all rifles, 21 people died in three mass public shootings from 2000 to 2002.[23] There may have been other mass public shootings, but the islands only had one police report that briefly provides details on the years 1998 to 2003. Repeated requests to the Royal Solomon Islands Police Force for information on other years proved fruitless. The police made it clear that since their nation gets most of its revenue from tourism, they saw little benefit to providing this information.[24] But even if these were the only mass public shootings from 1998 through 2012, the annual death rate would come to 2.98 per million people (given an average population of 470,000 over those 15 years). *This is 46 times higher than the US rate.*

In November 2017, the New York Times produced graphs using Lankford's data. Unfortunately, the graphs did not make it possible to determine how many attacks there were in different countries. I emailed Lankford to ask him for the data, but he ignored my requests.[25] When firearms expert Mike Weisser made the same request in April 2018, Lankford wrote back: "I shared those data exclusively with the NYT for their feature on this subject," and indicated that Weisser would have to contact the Times to ask for it. This was quite an unusual response, because media outlets normally only require exclusivity until they have published the information.

Weisser then wrote Max Fisher, one of the authors of the New York Times article, and copied Lankford's emails saying that the data was the property of the New York Times. Fisher wrote back: "I'm a little confused as to why Adam Lankford would say that. It's his data — we most certainly don't own or control it."[26] After sharing Lankford's entire email, Fisher replied, "So I suspect what he meant is not that we 'own' the data, but that he's choosing not to release it further. Have to respect his wishes on that, I think."

So while Lankford said that he couldn't give out the data because he had given it exclusively to the Times, the Times insisted that they also couldn't give it out to respect Lankford's wishes not to give it out.

How could Lankford have gotten "complete" data on mass shootings around the world? The US at least has computerized databases of news stories, but even these are greatly limited prior to 1991. For 1991, there are at least 389 newspapers included in the Nexis/Lexus database.[27] Just prior to 1991, there are only 31 newspapers. This number quickly gets smaller and smaller as one goes further back in time. And, of course, the English-language news media of decades ago couldn't be counted on to cover mass public shootings in Europe, let alone Africa or other parts of the world.

At first, I simply hoped that Lankford had discovered some previously unknown way of collecting these cases. But his paper provides very little specific information, no with no country-by-country breakdown other than for the US and four foreign countries. There isn't even a breakdown by continent or by year.

Lankford refused to comment on this paper when drafts were sent to him, and after we publicly released it Lankford turned down requests for his list of cases from five media outlets (Real Clear Politics, Fox News, Washington Times, Washington Post, and Circa News).[28]

Researchers who refuse to share their data or explain how they obtained their data make it difficult for others to verify and replicate their research.

III. How Frequently do Mass Public Shootings Occur in the World?

A. Defining Mass Public Shootings

Lankford says that he used the "criteria employed by the Federal Bureau of Investigation (FBI) in its 2014 active shooter report," with the exception that "only offenders who killed four or more victims were included" (p. 5). This is the same definition that was used by Lott and Landes (2001) and the work done by the Crime Prevention Research Center.[29]

- The FBI (2013) only includes shootings in "public places" such as commercial areas (malls, stores, and other businesses); schools and colleges; open spaces; government properties (including military bases and civilian offices); houses of worship; and healthcare facilities.
- The FBI excludes "shootings that resulted from gang or drug violence," occurred in the commission of another ongoing crime such as robbery, or arose primarily from self-defense — primarily a domestic dispute or barricade/hostage situation.
- To be counted as a mass shooting, Lankford also includes in his definition the traditional FBI requirement that four or more people have been killed at a

single place and time (not including the perpetrators). Lankford does this because including all active shooting cases "would almost certainly result in a higher percentage of missing cases" (Lankford, 2016, p. 5).

- There is no limit on the number of people involved in these attacks. The FBI states: "some incidents involved two or more shooters." For example, the FBI includes the 2015 San Bernardino, California attack by a husband and wife team. Had the report gone back to 1999, the FBI would have included the Columbine High School shooting, which involved two killers.

Lankford notes: "Data for this study were drawn first from the New York City Police Department's (NYPD) 2012 Active Shooter report. This report employs the Department of Homeland Security's definition of 'active shooter' . . . All efforts were made to ensure that the same data collection methodology employed by the NYPD was used to obtain this information. . . . although the [NYPD] dataset may be nearly comprehensive in its coverage of recent decades, it may be missing some older cases" (Lankford, 2016, p. 190-1). The NYPD defines active shooter cases as "an individual actively engaged in killing or attempting to kill people in a confined and populated area" (p. 190).[30] This is the same as FBI definition of active shooters and, again, Lankford excludes cases where fewer than four people were killed.

The NYPD includes a particularly dramatic case from November 2008 that involved ten Islamic terrorists killing 188 people across multiple locations in Mumbai, India (p. 50). Other examples they have include a group of six Islamic terrorists who left 62 dead in November 1997 attack at a tourist venue in Deir el-Bahri, Egypt (NYPD, 2012, p. 59) and Anders Behring Breivik, a Nazi, killed 69 people at a youth league event in Utoya, Norway in July 2011 (p. 175). The NYPD included a number of other terrorist cases.[31]

The list of cases provided by the NYPD is the only named source that Lankford cites in his study. As we will shortly show, Lankford is clearly wrong that the NYPD dataset is "nearly comprehensive in its coverage of recent decades." Indeed, the NYPD noted that its own researchers "limited [their] Internet searches to English-language sites, creating a strong sampling bias against international incidents," and thus under-counting foreign mass shootings. The NYPD only mentions that they did "internet searches," but Google or other search engines clearly miss cases as media in much of the world haven't had an online presence until recently and Google news searches tend to lose cases over time.

Given that Lankford says that he followed "the same data collection methodology employed by the NYPD," this creates real problems for his searches.

Russia is one of only four foreign countries for which Lankford provided the total number of mass public shooters. He claims that there were 15 shooters over the

period from 1966 through 2012. We found 34 shootings and at least 65 shooters, and we excluded 20 other attacks due to insurgency. Excluding rebel insurgencies reduces our count of foreign shootings, but we do it because that is the most apples-to-apples comparison to the type of mass shootings in the United States. We have excluded more cases due to them being classified as insurgency over a 15-year period than all the cases Lankford found over a 47 year period. Lankford's paper does not say he excludes insurgencies and the NYPD does include those cases,[32] yet he still gets the dramatically lower number.

Our primary source is the University of Maryland Global Terrorism Database (GTD), which collected data on over 170,000 terrorist attacks from 1970 to 2016 (Global Terrorism Database, 2017 and LaFree et al, 2015). The GTD defines terrorist attacks 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." The database lists attacks that were carried out using everything from firearms, incendiary, knifes, bombs, vehicles, chemical, biological, or radiological weapons. They divide their attacks into six categories: 1) Terrorism; 2) Insurgency/Guerilla Action; 3) Other Crime Type; 4) Intra/Inter-group conflict; 5) Lack of Intentionality; and 6) State Actor.

The only categories that sometimes meet our criteria for mass public shootings are "terrorism", "other crime type," and "intra/inter-group conflict." Government sponsored or directed/ordered killings or state terrorism (the "State Actor" category) are completely excluded. The NYPD does not include any such cases on its list, and Lankford excludes "sponsored acts of genocide or terrorism" (p. 191). We then reviewed each case using Nexis and web searches to determine whether they met our definition (exactly the same as Lankford used, minus insurgency-related shootings). Less than 50% of the terrorism shooting cases identified by the GTD met the definition of mass public shootings. Including insurgency-related shootings identified by GTD would have increased the number of foreign mass public shootings by 208, from 1,448 to 1,656, and would have reduced the United States share of these attacks to 2.53%.

One issue that was relatively common among cases in Africa and some other less developed countries is that some news stories only reveal the total killed and the number of places attacked. Without more information, we cannot determine whether each target meets the criterion of four or more people being killed. Twenty people may have been killed on different days in three different towns that are many miles apart. While it is possible that all three attacks satisfy our definition, we took the more conservative route and counted this as only one attack. This causes a slight underestimate of the total number of cases.

Kidnappings are a possible grey area with these cases. At one extreme, attackers start killing people and then take hostages when the police or military arrive. At the

other, attackers kidnap people and then kill them. The first type of case is clearly within the purview of this data. The second type is less obvious, though the NYPD includes two cases where a kidnapping preceded a shooting and in one of those cases the kidnapping clearly precipitated the shooting.[33]

While all our cases involve four or more people killed in one place at one time, we have removed most cases where fewer than four people were killed prior to a kidnapping. We have excluded cases where less than four people were killed before anyone was kidnapped unless it is clear that there was no ransom (such as an exchange of hostages) and no negotiations. There are 64 of these cases.

The GTD is also an incomplete source. For the 1998 to 2012 period, we found 43 attacks in the US whereas the GTD lists just 3: the 1999 Columbine High School shooting, the 2009 Fort Hood massacre, and the 2012 Sikh Temple attack in Oak Creek, Wisconsin. The Columbine attack is classified as "other crime," and the other two are classified as "terrorism." But the GTD readily admits that they do not have a comprehensive list of "other crime types," causing them to miss cases such as the 2012 Sandy Hook Elementary School attack that fall into that category.

While the GTD treats cases such as the Columbine and Fort Hood shootings differently, classifying Columbine as "other crime" and Fort Hood as "terrorism," Lankford argues that are "functionally similar to terrorism."[34] Both types involve premeditated attacks that aim to kill and wound as many people as possible because they know that the more people they harm the more media attention they will receive. They also involve the same type of planning, such as picking targets that aren't able to defend themselves. That some attackers are Muslims, while others are white supremacists or young people who feel that they are not properly appreciated, seems secondary to their goal of killing as many people as possible to get media coverage. The cases also appear the same in terms of any implications for gun control.

Over the fifteen years studied here, the GTD also misses 29 cases in Europe that they don't identify as terrorist attacks: Belgium 1, Bosnia 1, Croatia 1, England 1, Finland 2, France 3, Germany 2, Italy 1, the Netherlands 1, Russia 11, Serbia 2, Slovakia 1, Ukraine 1, and Yugoslavia 1. In Germany, there was two large school shootings (2002 where 18 were killed and 2009 where 15 were killed).[35] Finland, a country with about 1/57th the US's population, suffered ten people shot to death at a college in 2008 and five people fatally shot at a mall in 2009.[36] The GTD also missed all of the cases for some countries such as the Solomon Islands.

To obtain these additional cases missed by the GTD, at the CPRC we used our own Nexis and web searches for mass shootings for Europe and the United States and for large-scale mass public shootings where at least 15 people were killed. For some parts of the world we found Wikipedia entries on rampage and mass shootings.[37] We have also hired people who can speak Chinese, French, Polish, Russian, and

Spanish.

The NYPD report and Lankford don't discuss what search terms that they used. We employed Nexis to search for cases by year and our search terms were "mass W/10 shooting," "mass W/10 firearm*," "mass W/10 gun," "multiple W/10 shooting*," "multiple W/10 firearm*," and "multiple W/10 gun." While about 85 percent of cases we found were already identified by GTD and the CPRC, we did pick up another 86 cases.

Still, despite these searches, it is clear that we likely missed many mass public shootings around the world over the 1998 to 2012 period. For example, the GTD has only listed six Central American and Caribbean mass public shootings (2 for Haiti, 1 for Honduras, and 3 for Mexico) and we only picked up two more case for Mexico with Nexis, though Haiti and Honduras had homicide rates that were respectively 11.5 and 16.1 times higher than that of the US. Many other countries in this region also have very high homicide rates. While it is possible that countries with high homicide rates don't exhibit unusual rates of mass public shootings, it is also possible that the news media doesn't give much news coverage to a shooting with four fatalities in one of these countries because violence is so common.

Thus, while we have all the mass public shootings for the US and perhaps Europe, we are very unlikely to ever get all of the cases for the rest of the world. No incidents are identified in 91 countries, but that might simply be because we missed them. While we will show that the rate of mass public shootings in the rest of the world is much higher than in the US, that is true despite our numbers underestimating the prevalence of gun violence in the rest of the world.

B. Lankford's use of number of shooters rather than number of cases

As noted earlier, Lankford only reports the total number of shooters, not the total number of cases. 202 total shooters outside the United States represent a much smaller number of attacks. While Lankford doesn't provide his own list, the one dataset that he mentions is supplied by the NYPD.

The NYPD list that Lankford used contained 32 attacks outside of the US, perpetrated by at least 56 killers from 1966 to 2012, the same period that Lankford says he studied. This comes to an average of 1.8 killers per attack. The 2008 Mumbai, India attack tops the list with 10 killers. It isn't possible to determine the exact number of attackers in the NYPD list, because in one case (Israel in 1974) we only know that there was more than one killer. If there were two killers in that Israeli attack, and the NYPD average held for Lankford's entire sample, 202 shooters would amount to at most 112 attacks. We would have *12.9 times* more cases over 15 years than Lankford had over 47 years.

Lankford claims (p. 191): "although the [NYPD] dataset may be nearly

comprehensive in its coverage of recent decades, it may be missing some older cases." Given that Lankford says that his own list is "complete" and that he used the NYPD cases to make his own list, over the fifteen years that we studied the NYPD should give a fairly complete list of the cases Lankford believes occurred outside the US over that time.[38] From 1998 to 2012, the NYPD found 16 attacks outside the United States, with 27 killers and 393 killed. If you remove the Mumbai attack from the NYPD data, by far the worst of the mass public shootings on their list, there are only 17 killers and 205 deaths.

There is simply no possible way that the NYPD has a "nearly comprehensive" set of mass public shootings outside the United States over the 15 years from 1998 to 2012.

Out of our 1,448 cases, news reports provide of the number of killers involved in the attack in only 380 instances. In 98 cases, a lone killer was identified, that is 26% of the cases that list a number of attackers. Another 42 attacks had two killers and 27 had three, so that indicates 44% of the cases where the number of killers was identified had between one and three shooters. 107 were identified as having more than 10 killers. In larger scale attacks, numbers of perpetrators are virtually always reported as multiples of ten, making their accuracy doubtful. Witnesses and reporters are most likely just making a rough guess. News reports for 1,068 of them simply indicate that there were multiple attackers, but no specific number was provided.

In the US, just 45 shooters perpetrated the 43 mass public shootings between 1998 and 2012. If we take the most conservative estimate that there were two killers in the attacks with an indeterminate or plural number of shooters, our list shows that there would have been 10,701 attackers worldwide from 1998 to 2012. So our best guess is that the number of shooters is ***53 times*** greater than Lankford's over less than a third of his time period. The US would then account for only 0.42% of attackers.

If we exclude the 107 cases outside the US with more than 10 killers, whose accuracy is circumspect, there would be still be 3,081 killers. That amounts to an average of 2.3 killers per attack. The US share of the world's mass public shooters would be 1.44%, less than a third of the US share of the world population.

While the United State's precise share of the world's mass public shooters is uncertain, it is far below our share of the world's population. Even if one were to eliminate all foreign terrorist attacks on top of all the insurgency ones (and the NYPD dataset clearly includes terrorist cases for both the US and foreign countries), that leaves 709 foreign mass public shooters. That estimate of the number of shooters is still 26 times greater than the NYPD count and 42 times greater if the Mumbai case is cut.[39] Even if you look at Lankford's "complete" data over the entire 47 years, our number without any terrorism cases is 3.5 times greater than Lankford's number

over less than a third of the period that he studied.

If some of these non-government terrorism cases were to be excluded, Lankford's estimated number of shooters for the fifteen years that we studied should lie between 709 and 3,081, presumably near the top of that range.[40]

C. How the United States compares to the rest of the World

The list of all of our 1,491 cases from 1998 to 2012 is provided in Appendices 1 and 2. Of those, 43 occurred in the United States and 1,448 happened in the rest of the world. While the US had about 4.6 percent of the world's population during this period, it had just 2.88 percent of the mass public shootings.

Just as we compare crime rates across the United States by adjusting for different state populations, we report the population-adjusted rates across countries. It makes no more sense to compare the raw number of murders in Wyoming with the number in California than it is to compare raw numbers of murders from mass public shootings for the United State and India, a country with almost 4 times the US population.

The United States was host to a still smaller share of people killed in these attacks. Worldwide mass public shooting murders totaled 15,420 people, and the US accounted for 325 (2.1%) of these.

By both measures, the US is substantially below the world average. Per capita, mass public shootings occur with 35.1 percent less frequency and result in 40.6 percent fewer casualties. For 91 countries, no incidents are identified, but for many countries that might simply be because we missed cases.

Table 1 lists the per capita attack and death rates in the 89 countries where we identified mass public shootings. The US ranks 58th in attack rate and 62st in murder rate. Norway, Finland, Switzerland and Russia are major European countries with at least 45% higher rates of murder from mass public shootings than the United States. The rates in Pakistan and India are respectively 555% and 76% higher than the US rate. (Appendix 3 shows the absolute number by country.)

Table 1: Countries with Mass Public Shootings from 1998 through 2012: Ranking by per capita rate of attacks and people killed

Rank	Country	Number of Attacks per 100,000 People	Country	Number of People Killed per 100,000 People
1	Northern Mariana Islands	1.569	Northern Mariana Islands	6.275
2	Iraq	0.625	Iraq	6.007
3	Solomon Islands	0.600	Angola	5.221
4	Guyana	0.500	Guyana	4.000
5	Afghanistan	0.405	Solomon Islands	4.000
6	Algeria	0.299	Sierra Leone	3.309
7	Somalia	0.291	Burundi	2.936
8	West Bank and Gaza Strip	0.271	Algeria	2.808
9	Burundi	0.256	Afghanistan	2.783
10	Colombia	0.180	Somalia	2.581
11	Angola	0.175	Sudan	2.184
12	Yemen	0.140	West Bank and Gaza Strip	1.988
13	Sri Lanka	0.132	Colombia	1.752
14	Uganda	0.119	Norway	1.457
15	Israel	0.113	Uganda	1.420
16	Sierra Leone	0.109	Sri Lanka	1.335
17	Lebanon	0.105	Guinea	1.126
18	Armenia	0.100	Yemen	0.971
19	Sudan	0.100	Rwanda	0.874

20	Pakistan	0.086	Democratic Republic of the Congo	0.863
21	Philippines	0.061	Chad	0.825
22	Kosovo	0.059	Pakistan	0.718
23	Finland	0.058	Nigeria	0.701
24	Nigeria	0.057	Armenia	0.700
25	Nepal	0.051	Lebanon	0.684
26	Macedonia	0.050	South Sudan	0.641
27	Namibia	0.050	Nepal	0.630
28	Democratic Republic of the Congo	0.049	Israel	0.606
29	Azerbaijan	0.048	Mauritania	0.581
30	Central African Republic	0.048	Philippines	0.524
31	Georgia	0.044	Finland	0.442
32	Syria	0.043	Syria	0.397
33	Rwanda	0.034	Honduras	0.389
34	Mauritania	0.032	Liberia	0.364
35	Chad	0.031	Azerbaijan	0.321
36	Liberia	0.030	Kenya	0.317
37	Tajikistan	0.029	Niger	0.314
38	Peru	0.029	Kosovo	0.293
39	Ivory Coast (Cote d'Ivoire)	0.027	Central African Republic	0.262
40	Bosnia	0.026	Macedonia	0.250
41	South Sudan	0.025	Ivory Coast (Cote d'Ivoire)	0.225

42	Haiti	0.024	Georgia	0.200
43	Russia	0.024	Namibia	0.200
44	Kenya	0.024	India	0.193
45	South Africa	0.023	Switzerland	0.189
46	Croatia	0.023	Laos	0.169
47	Norway	0.022	Yugoslavia	0.169
48	Thailand	0.022	Ethiopia	0.164
49	Niger	0.021	Tajikistan	0.162
50	Guinea	0.021	Croatia	0.159
51	Kyrgyzstan	0.019	Russia	0.159
52	India	0.019	Bosnia	0.158
53	Yugoslavia	0.019	Peru	0.154
54	Serbia	0.019	South Africa	0.149
55	Slovakia	0.019	Slovakia	0.130
56	Senegal	0.017	Senegal	0.128
57	Laos	0.017	Turkey	0.122
58	**United States**	**0.015**	Serbia	0.121
59	Honduras	0.014	Haiti	0.120
60	Switzerland	0.014	Saudi Arabia	0.118
61	Turkey	0.012	Thailand	0.114
62	Iran (Islamic Republic of)	0.012	**United States**	**0.110**
63	Tunisia	0.010	Iran (Islamic Republic of)	0.105
64	Belgium	0.010	Mali	0.104
65	Saudi Arabia	0.008	Kyrgyzstan	0.096
66	Zimbabwe	0.008	Egypt	0.076
67	Uzbekistan	0.008	Venezuela	0.067

68	Venezuela	0.007	Uzbekistan	0.064
69	Mali	0.007	Belgium	0.057
70	Kazakhstan	0.007	Zimbabwe	0.054
71	France	0.007	Germany	0.040
72	Ethiopia	0.006	Tunisia	0.040
73	South Korea	0.006	Kazakhstan	0.040
74	Netherlands	0.006	Mexico	0.039
75	Cameroon	0.006	Netherlands	0.037
76	Egypt	0.005	Myanmar	0.036
77	Mexico	0.005	South Korea	0.035
78	Indonesia	0.004	Indonesia	0.033
79	Myanmar	0.004	France	0.033
80	Malaysia	0.004	Cameroon	0.030
81	Canada	0.003	Brazil	0.025
82	Argentina	0.003	United Kingdom	0.020
83	Germany	0.002	Malaysia	0.019
84	Ukraine	0.002	Bangladesh	0.015
85	Bangladesh	0.002	Canada	0.012
86	Italy	0.002	Ukraine	0.011
87	United Kingdom	0.002	Argentina	0.010
88	Brazil	0.002	Italy	0.009
89	Vietnam	0.001	Vietnam	0.005

Even with all of the cases identified as “Insurgency/Guerilla Action” removed from the sample, Iraq is still on top of the lists for the most attacks and deaths per capita right after Northern Mariana Islands. The Solomon Islands and Guyana follow in third and fourth. If we had data for the Solomon Islands over all 15 years, it may well place first. Afghanistan was the fifth worst in per capita attacks and ninth worst in deaths per capita, even excluding those directly related to the struggle for control of the government.

While we relied on GTD for classifying whether cases for Afghanistan and Iraq involved insurgency, removing non-insurgency cases for those two countries doesn't appreciably alter our results. Removing all those cases reduces the number of attacks outside the United States from 1,448 to 1,147, and would raise the US share of attacks from 2.88 to 3.61 percent. The share of murders rises from 2.11 to about 2.53 percent. Both rates are still well below the US share of the world population.

Even though we are examining less than a third as many years as Lankford claims to cover, we have found many more cases for three of the four countries for which he reveals his case count. The Philippines' 52 mass public shootings is nine more than the United States experienced, despite the US population being 3.5 times greater (using the populations in the midpoint of the period that we examined, 2005). Of course, there is the question of why Lankford revealed the numbers for these four countries. One possibility is that their counts are more accurate.

Table 2: Mass Public Shooters/Shootings: Comparing the four Countries that Lankford states the total number of cases he has identified over the 47 years from 1966 to 2012

	Lankford of number of shooters (1966 to 2012)	Our count of number of shooters (1998 to 2012)*	Our count of number of attacks (1998 to 2012)
France	10	5	4
Philippines	18	120	52
Russia	15	65	34
Yemen	11	65	29
Total	54	255	119

* This uses our most conservative measure where we only count cases where there are 10 or fewer shooters and when more than one shooter is involved but a precise number isn't provided we assume that number is two.

Breaking down the cases by geographic regions, we find that the United States ranks roughly in the middle in number of mass public shootings (Figures 1A-D). We use the sixteen geographic regions provided by the Population Reference Bureau (See

Appendix 4). Not surprisingly, Western Asia ranks first since it is largely comprised of Middle Eastern countries such as Iraq, which has per capita rates of attacks and deaths that are respectively 702 and 858 percent higher than those of the United States. Africa (both Northern and sub-Saharan) also has dramatically higher rates than the US. While attacks occur more frequently in Northern Africa, they are more deadly in sub-Saharan Africa (the average number of people killed per attack is 16.1 in sub-Saharan Africa and 9.3 in Northern Africa). The overall mass public shooting death rates in these two regions are fairly similar.

In South America, people are more than twice as likely to die from mass public shootings and attacks occur 87 percent more frequently. And there is a serious lack of news coverage of crime in South and Central America. Homicide rates are so high in some areas that the local media appear to ignore most murders. Central America's average homicide rate in 2008 was 5.8 times higher than in the United States that same year. Honduras' homicide rate was 11.3 times higher, and El Salvador's was 9.6 times higher. These high homicide countries just don't systematically report mass public shootings or even firearm homicides in general.

In Venezuela, not only was the official homicide rate 9.6 times higher than the US rate, but the government has gone to great lengths to prevent the media from reporting on murders. The newspaper El Universal reported that, starting in 2009, the Venezuelan police were supposed to tell "relatives of victims who are in the morgue of Caracas (Venezuela), not to make statements to the press in exchange for expediting the procedures to recover the bodies."[41]

There is evidence of this also happening in China. We have found three large-scale mass public shootings in China in years outside of the 1998 to 2012 period: 1994, 28 killed; 1981, 21 killed; and 1979, 16 killed.[42] We know of no other country that exhibited only such large mass public shootings, and none with between 4 and 15 fatalities. Victor Mair, a University of Pennsylvania professor who specializes in China, told us:

> I'm almost certain that they had mass public shootings of all sizes up to the three big ones, but such things just don't get recorded in the media. . . . The Chinese government is very good about hiding the news. Of course, it's easier to hide the news for smaller incidents, but much harder for larger incidents, because more people would have noticed them.[43]

As an example, Mair claims that friends of his in China have been "forbidden to talk about" a recent knife attack on school children.[44]

As discussed previously, the Solomon Islands only provided information for 5 of the 15 years we examined. Even if there were no other missing cases in the rest of Oceania, missing cases from the Solomon Islands could greatly affect our overall

estimate for this part of the world. All these points provide yet more indications that the United States has a smaller share of mass public shootings than our results show.

Probably of particular interest to people are comparisons between Europe and the United States. There are huge differences in mass public shooting rates across Northern, Western, Eastern, and Southern Europe. While the attack rate in Northern Europe is only 36 percent of the rate in the US, 20.4 people were killed per attack in Northern Europe versus 7.6 in the US. So the fatality rate from mass public shootings is the same in both Northern Europe and the US. The fatality rate in Eastern Europe was 27 percent lower than the rate in the US, and its rate of attacks was 20% lower.

Figure 1A: Mass Public Shooting Murders by Geographic Region (per 100,000 people)

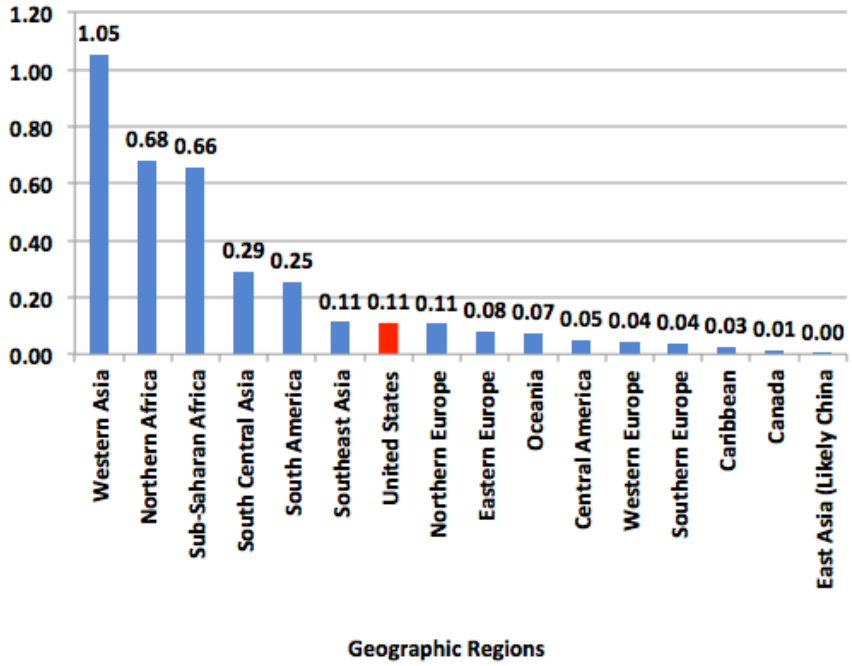


Figure 1B: Mass Public Shooting Woundings by Geographic Region (per 100,000 people)

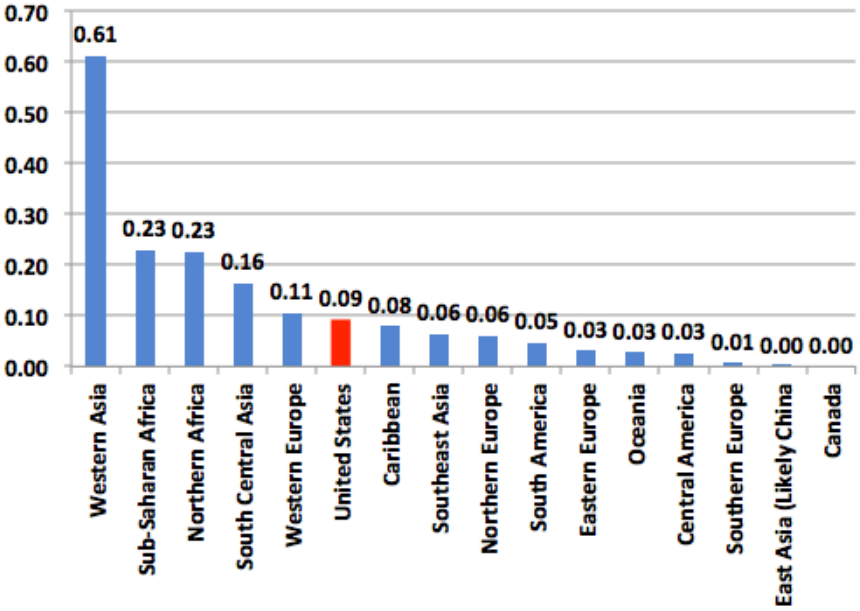
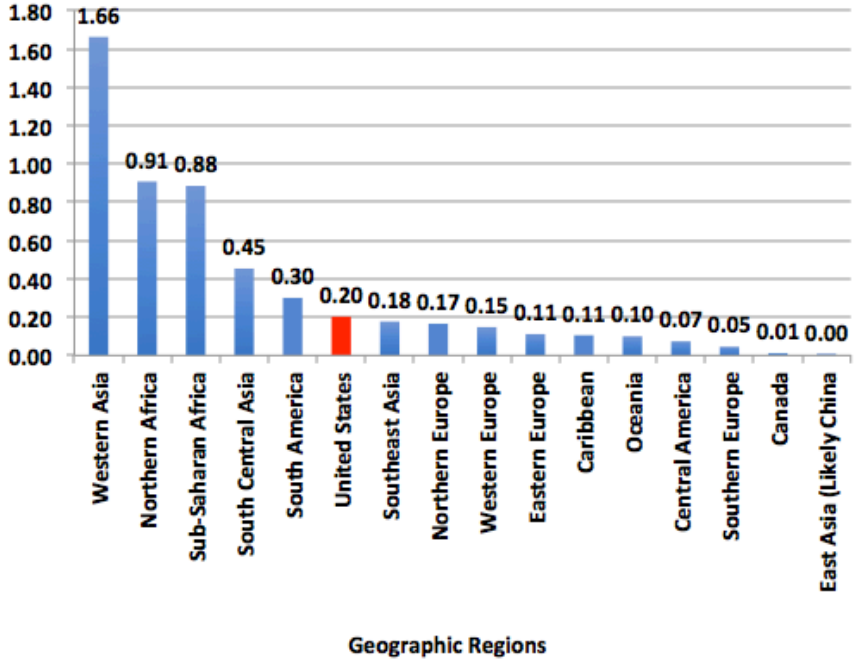


Figure 1C: Mass Public Shooting Casualties by Geographic Region (per 100,000 people)



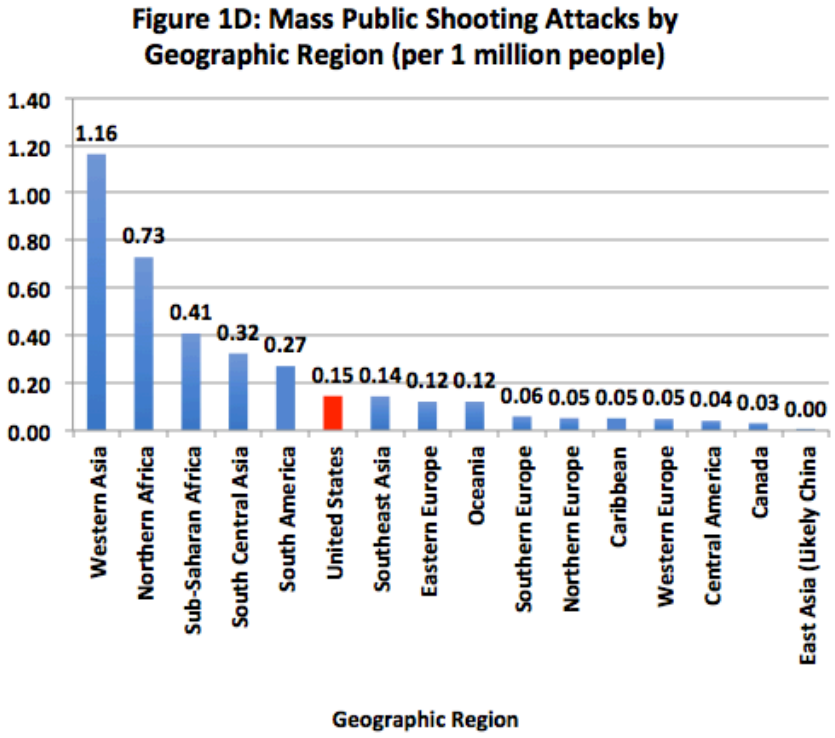
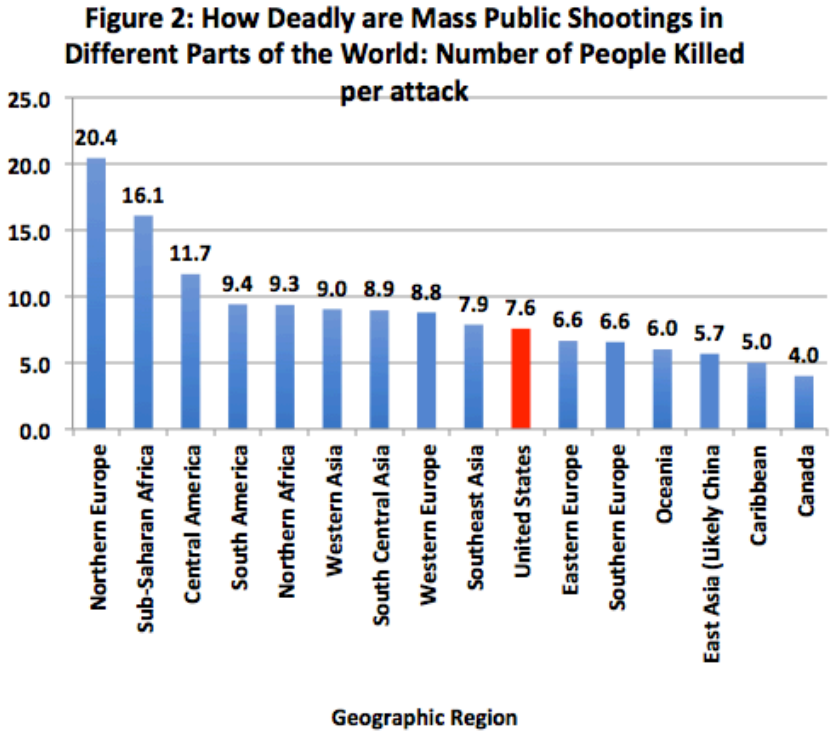


Figure 2 shows that attacks in the United States are relatively less deadly than in most of the rest of the world. There are lots of possible explanations for this. One is that better medical care means that fewer wounded people end up dying.

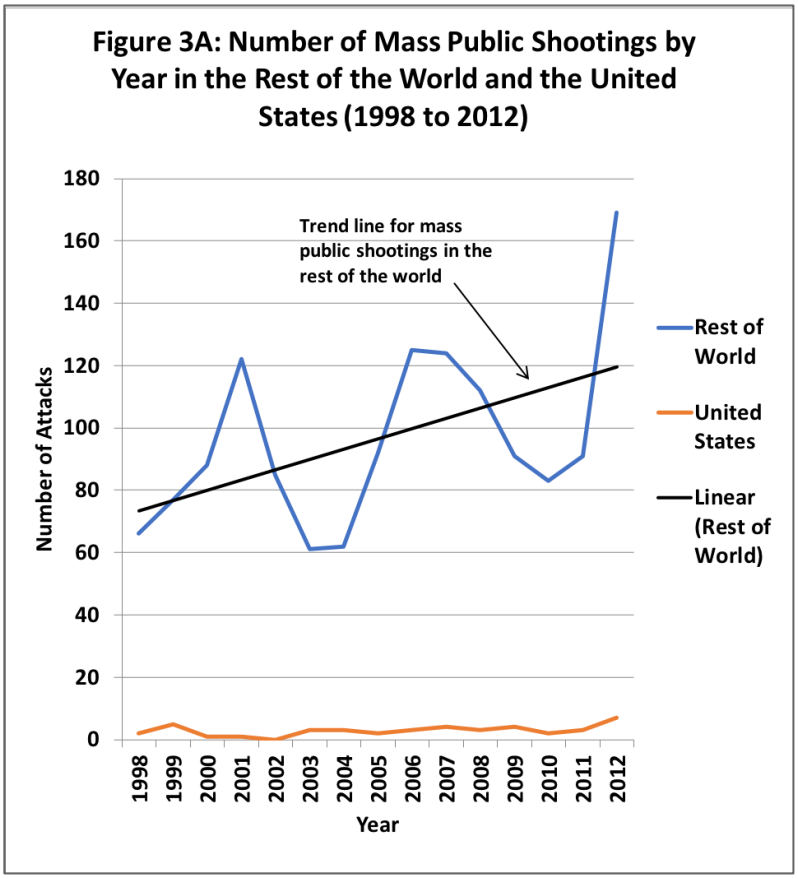


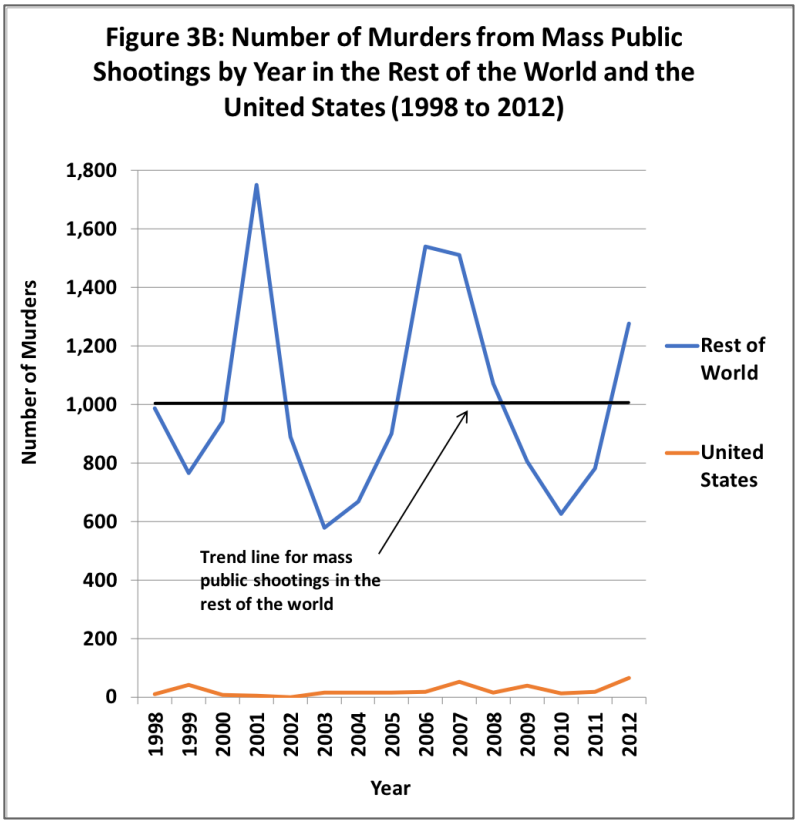
Figures 3A-B show there is a substantial increase in mass public shootings from 1998 to 2012. The average annual number of attacks outside the United States rose from 80 per year from 1998 to 2004 to 114 from 2006 to 2012. For the US, the annual average went from 2.1 to 3.7. The average murder rate in the rest of the world slightly increased over the same period of time.

But before one concludes that there has really been a worldwide increase in mass public shootings, we believe that at least some of this increase is due to the greater difficulty in finding older cases. In Africa and other parts of the world, searching news coverage on attacks prior to 2000 is an extremely difficult task.

Better news coverage in later years might not only explain the increase in recorded attacks but also why the number of people killed per attack appears to be falling over time. Cases with fewer victims might be getting coverage and that will reduce the average killed per attack.

Figure 3A: Number of Mass Public Shootings by Year in the Rest of the World and the United States (1998 to 2012)





III. Conclusion

We tried to duplicate Lankford's results. Coding these events sometimes involves subjectivity. But even when we use coding choices that are most charitable to Lankford, his 31 percent estimate of the US's share of world mass public shooters is cut by over 95 percent. The US makes up less than 1.43% of the mass public shooters, 2.11% of their murders, and 2.88% of their attacks. These results show that the U.S. clearly has fewer mass public shootings and murders from these attacks than the average rate for the rest of the world.

Lankford is clearly wrong that the NYPD dataset "may be nearly comprehensive in its coverage of recent decades." Over the 15 years that we studied, the NYPD dataset had 16 foreign attacks, with 27 killers and 393 killed. By contrast, we find 1,448 attacks, with 3,081 killers and 15,095 killed. The NYPD is very far from being comprehensive.. Lankford shouldn't have ignored the NYPD warning that they had a "strong sampling bias against international incidents."

Whenever possible, academics have a responsibility to make their data available so that other researchers can confirm their findings. This obligation is particularly important after the research has been published or received media attention or been used multiple times by the president. Lankford's refusal to provide either academics or the media with a list of his mass public shootings or to explain how he

identified his cases should have raised real concerns among journalists who covered his paper. For many places, such as Africa, it is challenging to obtain cases from the last decade, let alone during the 1960s, 1970s, 1980s, and 1990s.

The massive difference in the number of cases that we have discovered and what Lankford claimed points to either extreme sloppiness or possible fraud. His refusal to share his data, his paper, and even methodology details, suggest that he may have known that his study contained dramatic flaws.

After compiling this data for the 15 years from 1998 through 2012, the last fifteen years studied by Lankford, it is clear that he missed an enormous number of cases. We have found about *fifteen times* more shooters in 15 years than Lankford claimed to find in 47 years. But however one counts these cases, the United States is well below the average country regarding either the frequency or murder rate from these attacks or their deadliness.

This data not only has implication for how the United States compares to other countries but also to previous claims about what might be responsible for these attacks. For example, Lankford's claim that higher rates of gun ownership are associated with more mass public shooters completely disappears when this more complete data on mass public shooters is used (Lott, 2018).

Bibliography

Crime Prevention Research Center, "UPDATE: CPRC Original Research: All but two of the 25 worst mass public shootings, 60 of the worst 68, occurred outside the United States," Crime Prevention Research Center, updated February 14, 2018 (https://crimeresearch.org/2018/02/with-39-killed-in-tunisia-attack-the-top-three-mass-public-shootings-are-outside-the-united-states/).

Federal Bureau of Investigation, "A Study of Active Shooter Incidents in the United States between 2000 and 2013," U.S. Department of Justice, Federal Bureau of Investigation, September 16, 2013 (https://www.fbi.gov/file-repository/active-shooter-study-2000-2013-1.pdf/view).

Global Terrorism Database, "Codebook: Inclusion Criteria and Variables," Global Terrorism Database, University of Maryland, June 2017 (http://www.start.umd.edu/gtd/downloads/Codebook.pdf).

LaFree, Gary; Laura Dugan; and Erin Miller, "Putting Terrorism in Context: Lessons from global terrorism," Routledge Publishers: New York, New York, 2015.

Lankford, Adam, "Public Mass Shooters and Firearms: A Cross-National Study of 171 Countries," *Violence and Victims*, January 2016: 1-13.

Lott, John R., Jr., "A Cross Country Examination of Mass Public Shootings and Gun Ownership Rates," August 3, 2018.

Lott, John R., Jr., *More Guns, Less Crime*, University of Chicago Press: Chicago, Illinois, 3rd edition, 2010.

Lott, John R., Jr., and William M. Landes, "Multiple Victim Public Shootings," Social Science Research Network, June 10, 2001 (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=272929).

Lott, John R., Jr., and William M. Landes, "Acts of Terror with Guns: Multiple Victim Shootings," Chapter 6 in *The Bias Against Guns*, Regnery Publishing: Washington, D.C., 2003.

New York City Police Department, "Active Shooter: Recommendations and Analysis for Risk Mitigation, New York City Police Department, 2012 Edition."

Appendix 1: List of Mass Public Shootings and references for other countries besides the United States

This appendix is 451 pages long.

Appendix 2: List of Mass Public Shootings and references for the United States

Both Appendixes 1 and 2 are available here: **https://tinyurl.com/ydyay684**

Appendix 3: Countries with Mass Public Shootings from 1998 through 2012: Ranking by per capita rate of attacks and people killed

Rank	Country	Number of Attacks	Country	Killed
1	India	208	India	2130
2	Iraq	180	Iraq	1730
3	Pakistan	139	Pakistan	1166
4	Afghanistan	121	Nigeria	922
5	Algeria	98	Algeria	921
6	Colombia	83	Sudan	878
7	Nigeria	75	Afghanistan	832
8	Philippines	52	Colombia	806
9	United States	43	Angola	804
10	Sudan	40	Democratic Republic of the Congo	525
11	Russia	34	Philippines	444
12	Uganda	32	Uganda	382
13	Democratic Republic of the Congo	30	United States	325
14	Yemen	29	Sri Lanka	263
15	Angola	27	Burundi	229
16	Sri Lanka	26	Russia	227
17	Somalia	25	Somalia	222
18	Burundi	20	Yemen	201
19	Thailand	14	Sierra Leone	182
20	Nepal	13	Nepal	160
21	South Africa	11	Ethiopia	127
22	Indonesia	9	Guinea	107
23	Turkey	9	Kenya	107
24	West Bank and Gaza Strip	9	Turkey	89
25	Iran (Islamic Republic of)	8	Chad	80

26	Israel	8	Rwanda	76
27	Kenya	8	Indonesia	74
28	Peru	8	Thailand	74
29	Syria	8	Iran (Islamic Republic of)	73
30	Sierra Leone	6	Syria	73
31	Ethiopia	5	South Africa	70
32	Ivory Coast (Cote d'Ivoire)	5	Norway	67
33	Mexico	5	West Bank and Gaza Strip	66
34	Azerbaijan	4	Egypt	56
35	Egypt	4	South Sudan	52
36	France	4	Brazil	46
37	Guyana	4	Niger	44
38	Lebanon	4	Israel	43
39	Armenia	3	Peru	43
40	Bangladesh	3	Mexico	42
41	Brazil	3	Ivory Coast (Cote d'Ivoire)	41
42	Chad	3	Germany	33
43	Finland	3	Guyana	32
44	Niger	3	Saudi Arabia	29
45	Rwanda	3	Honduras	28
46	Solomon Islands	3	Azerbaijan	27
47	South Korea	3	Lebanon	26
48	Central African Republic	2	Finland	23
49	Georgia	2	Armenia	21
50	Germany	2	Bangladesh	21
51	Guinea	2	France	20
52	Haiti	2	Solomon Islands	20
53	Myanmar	2	Mauritania	18
54	Saudi Arabia	2	Myanmar	18
55	Senegal	2	Venezuela	18
56	Serbia	2	Yugoslavia	18
57	South Sudan	2	South Korea	17
58	Tajikistan	2	Uzbekistan	17
59	Uzbekistan	2	Senegal	15
60	Venezuela	2	Mali	14
61	Yugoslavia	2	Switzerland	14
62	Argentina	1	Serbia	13
63	Belgium	1	Liberia	12

64	Bosnia	1	United Kingdom	12
65	Cameroon	1	Central African Republic	11
66	Canada	1	Tajikistan	11
67	Croatia	1	Haiti	10
68	Honduras	1	Laos	10
69	Italy	1	Georgia	9
70	Kazakhstan	1	Croatia	7
71	Kosovo	1	Slovakia	7
72	Kyrgyzstan	1	Zimbabwe	7
73	Laos	1	Belgium	6
74	Liberia	1	Bosnia	6
75	Macedonia	1	Kazakhstan	6
76	Malaysia	1	Netherlands	6
77	Mali	1	Cameroon	5
78	Mauritania	1	Italy	5
79	Namibia	1	Kosovo	5
80	Netherlands	1	Kyrgyzstan	5
81	Northern Mariana Islands	1	Macedonia	5
82	Norway	1	Malaysia	5
83	Slovakia	1	Ukraine	5
84	Switzerland	1	Argentina	4
85	Tunisia	1	Canada	4
86	Ukraine	1	Namibia	4
87	United Kingdom	1	Northern Mariana Islands	4
88	Vietnam	1	Tunisia	4
89	Zimbabwe	1	Vietnam	4

Appendix 4: List of Countries by Region

Here is the list of countries by region as provided by the Population Reference Bureau (https://assets.prb.org/pdf05/05WorldDataSheet_Eng.pdf).

- Northern Africa (exclude Sudan): Algeria, Egypt, Libya, Morocco, Tunisia, Western Sahara, West Bank and Gaza Strip;
- Sub-Saharan Africa: Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo, Democratic Republic of the Congo, Cote d'Ivoire, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mayotte,

Mozambique, Namibia, Niger, Nigeria, Reunion, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia, Zimbabwe;

- Northern America: Canada, United States;
- Central America: Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama;
- Caribbean: Antigua and Barbuda, Bahamas, Barbados, Cuba, Dominica, Dominican Republic, Grenada, Guadeloupe, Haiti, Jamaica, Martinique, Netherlands Antilles, Puerto Rico, Saint Lucia, St. Kitts-Nevis, St. Vincent/Grenadines, Trinidad and Tobago;
- South America: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, French Guiana, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela;
- Western Asia: Armenia, Azerbaijan, Bahrain, Cyprus, Georgia, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Palestinian Territory, Qatar, Saudi Arabia, Syria, Turkey, United Arab Emirates, Yemen;
- South Central Asia: Afghanistan, Bangladesh, Bhutan, India, Iran, Kazakhstan, Kyrgyzstan, Maldives, Nepal, Pakistan, Sri Lanka, Tajikistan, Turkmenistan, Uzbekistan;
- Southeast Asia: Brunei, Cambodia, East Timor, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam;
- East Asia: China, Hong Kong (China), Macao (China), Japan, North Korea, South Korea, Mongolia, Taiwan;
- Northern Europe: Channel Islands, Denmark, Estonia, Finland, Iceland, Ireland, Latvia, Lithuania, Norway, Sweden, United Kingdom;
- Western Europe: Austria, Belgium, France, Germany, Liechtenstein, Luxembourg, Monaco, Netherlands, Switzerland;
- Eastern Europe: Belarus, Bulgaria, Czech Republic, Hungary, Moldova, Poland, Romania, Russia, Slovakia, Ukraine;
- Southern Europe: Albania, Andorra, Bosnia-Herzegovina, Croatia, Greece, Italy, Kosovo, Macedonia, Malta, Portugal, San Marino, Serbia and Montenegro, Slovenia, Spain, Yugoslavia;
- Oceania: Australia, Fed. States of Micronesia, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Nauru, New Caledonia, New Zealand, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu.

End Notes

[1] Michelle Ye Hee Lee, "Obama's inconsistent claim on the 'frequency' of mass shootings in the U.S. Other similar quotes by Obama that relied on Lankford's claim include:
"We are the only advanced country on Earth that sees these kinds of mass shootings every few months." – Obama, statement on shootings at Umpqua Community College, Roseburg, Ore., Oct. 1, 2015
"At some point, we as a country will have to reckon with the fact that this type of mass violence does not happen in other advanced countries. It doesn't happen in other places with this kind of frequency." – Obama, statement on the shooting in Charleston, S.C., June 18, 2015

[2] Adam Lankford, "Public Mass Shooters and Firearms: A Cross-National Study of 171 Countries," *Violence and Victims*, Vol 31, no. 2, 2016, pp. 1-13.

[3] Joe Palazzolo and Alexis Flynn, "US Leads World in Mass Shootings," *Wall Street Journal*, October 3, 2015 (http://www.wsj.com/articles/u-s-leads-world-in-mass-shootings-1443905359).

[4] This is the first sub-headline in the article. Joe Palazzolo and Alexis Flynn, "5 Things About Mass Shootings in the U.S.," *Wall Street Journal*, October 2, 2015 (https://blogs.wsj.com/briefly/2015/10/02/oreshoot/).

[5] Melissa Healy, "Why the U.S. is No. 1—in mass shootings," *Los Angeles Times*, August 24, 2015 (http://www.latimes.com/science/sciencenow/la-sci-sn-united-states-mass-shooting-20150824-story.html).

[6] Tanya Basu, "Why the U.S. Has 31% of the World's Mass Shootings," *Time*, August 24, 2015 (http://time.com/4007909/gun-violence-mass-shootings/).

[7] Peter Oumanski, "Study: Mass Shootings 'Exceptionally American Problem'," Newsweek, August 23, 2015 (http://www.newsweek.com/2015/09/11/study-sees-mass-shootings-exceptionally-american-problem-365260.html).

[8] Sarah Kaplan, "American exceptionalism and the 'exceptionally American' problem of mass shootings," Washington Post, August 27, 2015 (https://www.washingtonpost.com/news/morning-mix/wp/2015/08/27/american-exceptionalism-and-the-exceptionally-american-problem-of-mass-shootings/).

[9] Jen Christensen, "Why the U.S. has the most mass shootings," CNN, August 28, 2015 (http://www.cnn.com/2015/08/27/health/u-s-most-mass-shootings/).

[10] Melissa Healy, "Why the US is No. 1 in mass shootings: study," The Sydney Morning Herald, August 28, 2015 (https://www.smh.com.au/world/why-the-us-is-no-1-in-mass-shootings-study-20150828-gj9oi8.html).

[11] Susan Miller, "More guns are simply not the answer," USA Today, January 5, 2016 (http://www.usatoday.com/story/opinion/voices/2016/01/05/voices-guns-ownership-mass-shootings/77756466/); Jane Clayson, "In San Bernardino, Yet Another Mass Shooting," NPR's On Point with Tom Ashbrook, December 3, 2015 (http://onpoint.wbur.org/2015/12/03/san-bernardino-mass-shooting-latest); ABC Evening News, "Multiple shooters, including a woman: What sets California apart from other mass shootings," ABC, December 3, 2015; Associated Press, Fox News, December 3, 2015 (http://www.foxnews.com/us/2015/12/03/multiple-shooters-including-woman-what-sets-california-apart-from-other-mass.html).

[12] The information on the worldwide coverage for Lankford's work is available on his website (http://adamlankford.com/pressroom.htm).

[13] "What Explains U. S. Mass Shootings? International Comparisons Suggest an Answer," New York Times, November 8, 2017 and "What's Going On in This Graph?" New York Times, March 13, 2018

[14] Sarah Toy, "How U.S. compares to rest of world when it comes to homicides," USA Today, October 2, 2017; Kim Hjelmgaard, "Americans really like their guns. They own 42% of 650 million civilian firearms worldwide," USA Today, October 3, 2017; and The World Staff, "How other countries can help us understand America's mass shooting crisis," USA Today, November 20, 2017.

[15] Rick Noack, "Norway and Australia move forward with new gun control measures, as U.S. debate rages on," Chicago Tribune, March 1, 2018; Fernando Ramirez, "What Texans think causes mass shootings and what they get wrong," Houston Chronicle, May 21, 2018; Rick Noack, "As U.S. Gun Debate Rages On, Australians Hand In 57,000 Firearms, And Norway Is Set For A Broad Ban," Washington Post, March 1, 2018; Rick Noack, "Europeans had school shootings, too. Then they did something about it," Washington Post, May 18, 2018; Raj Persaud and Peter Bruggen, "YouTube HQ Attack: The Psychology of Workplace Shootings," Psychology Today, April 4 2018; and Paul Specht, "Does America own 42 percent of the world's guns?" Politifact, March 5, 2018. This year he has also been different shows on CNN and MSNBC. For example, he was on MSNBC on February 16, 2018 (https://www.msnbc.com/velshi-ruhle/watch/gun-ownership-worldwide-and-what-laws-work-1163365443929) and his work was discussed on CNN on February 14, 2018 (https://archive.org/details/CNNW_20180215_050000_Anderson_Cooper_360/start/1180/end/1240?q=%22Adam+Lankford%22).

[16] Rick Noack, "Europeans had school shootings, too. Then they did something about it," Washington Post, May 18, 2018.

[17] After graphs using Lankford's data appeared in the New York Times, Michael Weisser contacted both Lankford and the authors of the New York Times article, but neither were willing to provide him any information. See "What Explains U. S. Mass Shootings? International Comparisons Suggest an Answer," New York Times, November 8, 2017.

[18] Maxim Lott, "Critics shoot holes in widely cited gun study," Fox News, July 28, 2016 (http://www.foxnews.com/us/2016/07/28/critics-shoot-holes-in-widely-cited-gun-study.html).

[19] Maxim Lott, "Critics shoot holes in widely cited gun study," Fox News, July 28, 2016 (http://www.foxnews.com/us/2016/07/28/critics-shoot-holes-in-widely-cited-gun-study.html).

[20] I emailed Lankford originally on September 3, 2015. An employee for the CPRC emailed Lankford on December 2, 2015. In that email exchange, Lankford wrote that he would not provide a copy of his list of mass public shootings, but in compiling a list he only wrote: "journal articles can be helpful, as can searching large media databases and foreign media websites." We also have a copy of a Fox News email to Lankford to on March 20, 2016.

[21] From an email exchange with Lankford on February 2, 2016.

[22] Maxim Lott, "Critics shoot holes in widely cited gun study," Fox News, July 28, 2016 (http://www.foxnews.com/us/2016/07/28/critics-shoot-holes-in-widely-cited-gun-study.html).

[23] On June 8, 2002, ten people were shot to death by the Guadalcanal Liberation Front (GLF), an Islamic organization. April 2002, six Melanesian Brothers, who were Christian and working with the Catholic church, were murdered by the Islamic Guadalcanal Liberation Front. November 12, 2000: four people were shot and killed by Bougainvilleans at the Gizo Hotel. Sam Ata, Sofia Macher, Joni Madraiwiwi, Caroline Laoire, and Kamilo Teke, "Solomon Islands Truth and Reconciliation Commission: Final Report," Volume 1, February 2012 (http://pacificpolicy.org/files/2013/04/Solomon-Islands-TRC-Final-Report-Vol1.pdf). For information on the Solomon Islands' gun control regulations see David H. Capie, Under the Gun: The Small Arms Challenge in the Pacific, Victoria University Press, 2003, p. 34.

[24] I emailed the Solomon Islands national police four times between February 12, 2016 and March 20, 2016. These emails were also followed up with telephone calls on April 5 and 13, 2016.

[25] I emailed Lankford on November 7, 2017 asking him for the data that he had provided the New York Times.

[26] Emails provided by Michael Weisser. His emails began on March 31, 2018. His email to the New York Times' Max Fisher was on April 3rd, 2018.

[27] John R. Lott, Jr. and Kevin A. Hassett, "Is newspaper coverage of economics events politically biased?" Public Choice, July 2014 (http://link.springer.com/article/10.1007/s11127-014-0171-5), p. 70.

[28] Carl Cannon, "Mass Shootings in America: Anatomy of a Hyped Statistic," Washington Bureau Chief, Real Clear Politics, September 4, 2018; Lukas Mikelionis, "Study claiming US is home of one-third of mass-shooters worldwide debunked; figure less than 1.5 percent," Fox News, September 1, 2018; Stephen Dinan, "Shock study: U.S. had far fewer mass shootings than previously reported," Washington Times, August 29, 2018; Glenn Kessler, Washington Post, September 5, 2018; and Leandra Bernstein, "Gun violence statistics overestimated in 2 reports," Circa News, September 1, 2018.

[29] See also Lott and Landes (2003) and Lott (2010).

[30] The Department of Homeland Security publication adds a weak qualifier to that sentence: "in most cases, active shooters use firearms(s) and there is no pattern or method to their selection of victims." This is a "weak" qualifier because there are plenty of cases where the FBI's list of active shooters had a grudge against someone, and that person was the only person killed. Take the shooting at the Crawford County Courthouse in Girard, Kansas on September 13, 2011. Jesse Ray Palmer, the killer, "inquired about the location of a specific judge, who was not in the building, and then shot and wounded the judge's secretary. No one was killed; one person was wounded." It wasn't even necessary that others be shot at for that case to be included in the list. Or take a shooting at another bar — the Sandbar Sports Grill in Vail, Colorado, on November 7, 2009. "Before the attack, Moreau had an argument inside the bar and was escorted out by security." He returned to the bar and killed the person who he had the argument with. This last case is also included in the NYPD list of cases (Case #54 on p. 44). A number of the NYPD cases involve the killers specifically shooting security guards, which are hardly random individuals (Case #282 on p. 181, Case 292 on pp. 186-7). See Federal Bureau of Investigation, "A Study of Active Shooter Incidents in the United States Between 2000 and 2013," U.S. Department of Justice, Washington Navy Yard, Washington, D.C., September 16, 2013. New York City Police Department, "Active Shooter: Recommendations and Analysis for Risk Mitigation, 2012 Edition."

[31] For example, these included: "May 15, 1974: Terrorists from the Popular Front for the Liberation of Palestine opened fire at an elementary school in a series of attacks that killed 26 people and wounded 70 others" (p. 147), "December 27, 1985: Three gunmen belonging to the Abu Nidal Organization opened fire at the El-Al ticket counter at Vienna's Schwechat Airport, killing three people and wounding 30 others" (p. 203), and "March 6, 2008: Alaa Abu Dhein opened fire in a crowded library at the Mercaz Harav Yeshiva in Jerusalem, killing eight teenage students and wounding 11 others" (p. 102).

[32] For example, we did not include the following case on the NYPD list (Case #280, pp. 179-80): "A group of three Al-Shabaab insurgents opened fire at the Muna Hotel in Somalia, killing roughly 30 people and injuring 16 others. The gunmen, who were disguised in government military uniforms, targeted bystanders, hotel staff and armed guards."

Excluding cases involving insurgents greatly reduces our sample size in such places as Afghanistan, Iraq, the Philippines, and Russia. We excluded twenty shootings that were part of the Russian-Chechen conflict. The most deadly was the Beslan School siege of September 1, 2004, which left 385 dead and another 783 wounded. Another attack at the Dubrovka Theater in Moscow from October 23-26, 2002 left around 130 dead and over 450 wounded.

[33] The one case where the kidnapping and sexual assault clearly precipitated the shooting was the NYPD's case 276 (NYPD, 2012, p. 177), where the police officers were shot while investigating the crime.

[34] Lankford correctly argues that the Columbine and Fort Hood type shootings are essentially the same, even if one is labeled as terrorism and the other as "other crime." Lankford (2016, p. 188) writes: "these

public mass shootings—which are also sometimes referred to as active shootings or rampage shootings—stand out as particularly concerning because they are typically premeditated attacks that strike random, innocent victims (Newman, Fox, Roth, Mehta, & Harding, 2004). This makes them functionally similar to terrorism."

He has made similar comments to the press: "Lankford said that whatever mass killers' particular motivations might be, they tend to share certain psychological traits that may be more important than their agendas. Such traits include a sense of victimization, a pattern of seeking negative attention, and being suicidal or not caring whether they live" (Devlin Barrett and Mark Berman, "Austin bombings renew debate: What crimes do we label as terrorism?" Washington Post, March 23, 2018).

[35] These two school shootings in Germany were at Erfurt, Germany, April 26, 2002 and Winnenden, Germany, March 11, 2009.

[36] These two attacks in Finland were at a vocational college in Kauhajoki, Finland, Sept. 23, 2008 and the Sello shopping center in Espoo, Finland, Dec. 31, 2009,

[37] https://en.wikipedia.org/wiki/List_of_rampage_killers, https://en.wikipedia.org/wiki/Category:Mass_shootings_by_country, https://en.wikipedia.org/wiki/Category:Mass_shootings_by_continent

[38] The statement that the NYPD dataset "may be nearly comprehensive in its coverage of recent decades" is puzzling. If Lankford has a "complete" list of cases, he should be able to compare it to the NYPD list and say for certain whether it is comprehensive. It is not obvious why he uses the qualifying term "may be."

[39] Presumably all terrorist attacks shouldn't be excluded, both because the NYPD and FBI reports include terrorist attacks and Lankford claiming that terrorist and non-terrorist attacks were "functionally similar." An email from Glenn Kessler at the Washington Post (Thursday, August 30, 2018) noted Lankford "did not respond to my requests to offer his full list and it took some prodding to get the Mumbai admission out of him." This was presumably because he deemed it to be a "sponsored" terrorist activity, though that is not obvious. If the San Bernardino killers got training in the Middle East, are they sponsored? Is the first Ft Hood shooter "sponsored" because he was in communication with one of the influential clerics associated with ISIS? Is the Pulse nightclub shooter "sponsored" because he was inspired by information put out over the Internet by ISIS? Is funding required to list attacks as "sponsored"? Without information on these questions, it is only possible to provide a range of possible estimates.

[40] Presumably all terrorist attacks shouldn't be excluded, both because the NYPD and FBI reports include terrorist attacks and Lankford claiming that terrorist and non-terrorist attacks were "functionally similar." An email from Glenn Kessler at the Washington Post (Thursday, August 30, 2018) noted Lankford "did not respond to my requests to offer his full list and it took some prodding to get the Mumbai admission out of him." This was presumably because he deemed it to be a "sponsored" terrorist activity, though that is not obvious. If the San Bernardino killers got training in the Middle East, are they sponsored? Is the first Ft Hood shooter "sponsored" because he was in communication with one of the influential clerics associated with ISIS? Is the Pulse nightclub shooter "sponsored" because he was inspired by information put out over the Internet by ISIS? Is funding required to list attacks as "sponsored"? Without information on these questions, it is only possible to provide a range of possible estimates.

[41] "Venezuela favorece a los familiares de fallecidos que no informan a la prensa." El Mundo, August 22, 2010 (http://www.elmundo.es/america/2010/08/22/venezuela/1282502008.html).

[42] Beijing and Jianguomen, China, September 9, 1994; Fudong, China, February 17, 1981 (http://news.sina.com.cn/s/2009-09-08/070216258800s.shtml); and Qingyang, China, September 24 & 25, 1979. (http://www.360doc.com/content/16/1214/11/29240584_614574394.shtml).

[43] Email correspondence on May 1, 2018. Victor Mair contacted other academics who made similar statements.

[44] In an email from Victor Mair dated June 30, 2018.