

Report from the Crime Prevention Research Center

The FBI's Misrepresentation of the change in Mass Public Shootings

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John R. Lott, Jr.
President
johnrlott@crimeresearch.org
484-802-5373

Rebekah C. Riley
Director of Communications
rebekahcriley@crimeresearch.org
386-717-9210

Abstract

An FBI report released on September 16th, 2014 makes the assertion that active shooter attacks and deaths have increased dramatically since 2000 – both increasing at an annual rate of about 16 percent. As the headline in the Wall Street Journal stated: “Mass Shootings on the Rise, FBI says.”

But the FBI made a number of subtle and misleading decisions as well as outright errors. Once these biases and mistakes are fixed, the annual growth rate in homicides is cut in half. When a longer period of time is examined (1977 through the first half of 2014), deaths from Mass Public Shootings show only a slight, statistically insignificant, increase – an annual increase of less than one percent.

The FBI’s misleadingly includes cases that aren’t mass shootings – cases where no one or only one person was killed in a public place. While the FBI assures people that it “captured the vast majority of incidents falling within the search criteria,” their report missed 20 shootings where at least two people were killed in a public place. Most of these missing cases took place early on, biasing their results towards showing an increase.

I. Introduction

In a report released last week, the FBI claimed that between 2000 and 2013 there were 160 "active shooting incidents" in public places.¹ Even more worrisome, these attacks increased dramatically from just a single one in 2000 to 17 in 2013 and murders from 7 to 86 over the same period. Statistically, over time they find that attacks and the number of people killed had increased at an average annual rate of 16 percent. With the FBI officially behind the claims, media outlets worldwide gave this extensive coverage.

While the FBI report provides graphs illustrating "active shooting incidents," not mass shootings, the media has understandably interpreted the report as implying that mass public shootings have similarly increased. For example, the report's introduction assures readers: "The study does not encompass all mass killings or shootings in public places and therefore is limited in its scope. Nonetheless, it was undertaken to provide clarity and data of value to both law enforcement and citizens as they seek to stop these threats and save lives during active shooter incidents."² The report discusses mass public shootings, but it never makes it clear to the readers that these types of fatalities and attacks are Actually not increasing over time. This caused great confusion. A quick look at major headlines shows how the press has read this report:³

"Mass Shootings on the Rise, FBI says," **Wall Street Journal**

"F.B.I. Confirms a Sharp Rise in Mass Shootings Since 2000," **New York Times**

"FBI: Mass shooting incidents occurring more frequently," **CNN**

* Rujun Wang and Chengyu Huang provided valuable research assistance on this project.

¹ Federal Bureau of Investigation, "A Study of Active Shooter Incidents in the United States Between 2000 and 2013," U.S. Department of Justice, September 16, 2013.

² From page 5 of the report.

³ For examples of the extensive media coverage see Devlin Barrett, "Mass Shootings on the Rise, FBI says," Wall Street Journal, September 24, 2014

(<http://online.wsj.com/articles/mass-shootings-on-the-rise-fbi-says-1411574475>). BBC, "FBI study: Deaths in mass shootings increasing," BBC September 24, 2014

(<http://www.bbc.com/news/world-us-canada-29357199>). Michael Schmidt, "F.B.I. Confirms a Sharp Rise in Mass Shootings Since 2000," New York Times, September 24, 2014

(http://mobile.nytimes.com/2014/09/25/us/25shooters.html?emc=edit_th_20140925&nl=todaysheadlines&nlid=67549140&r=1&referrer=). Evan Perez, "FBI: Mass shooting incidents occurring more frequently," CNN, September 24, 2014

(http://www.cnn.com/2014/09/24/justice/fbi-shooting-incidents-study/index.html?hpt=hp_t2).

One of the few publications that didn't make such a link in their headline was USA Today. Donna Leger, "'Active shooter' incidents on the rise," USA Today, September 25, 2014 (<http://www.usatoday.com/story/news/nation/2014/09/24/active-shooter-incidents-rising-fbi-finds/16158921/>).

“FBI study: Deaths in mass shootings increasing,” *BBC*

Figure 1: FBI's measure of active shooting attacks from 2000 to 2013

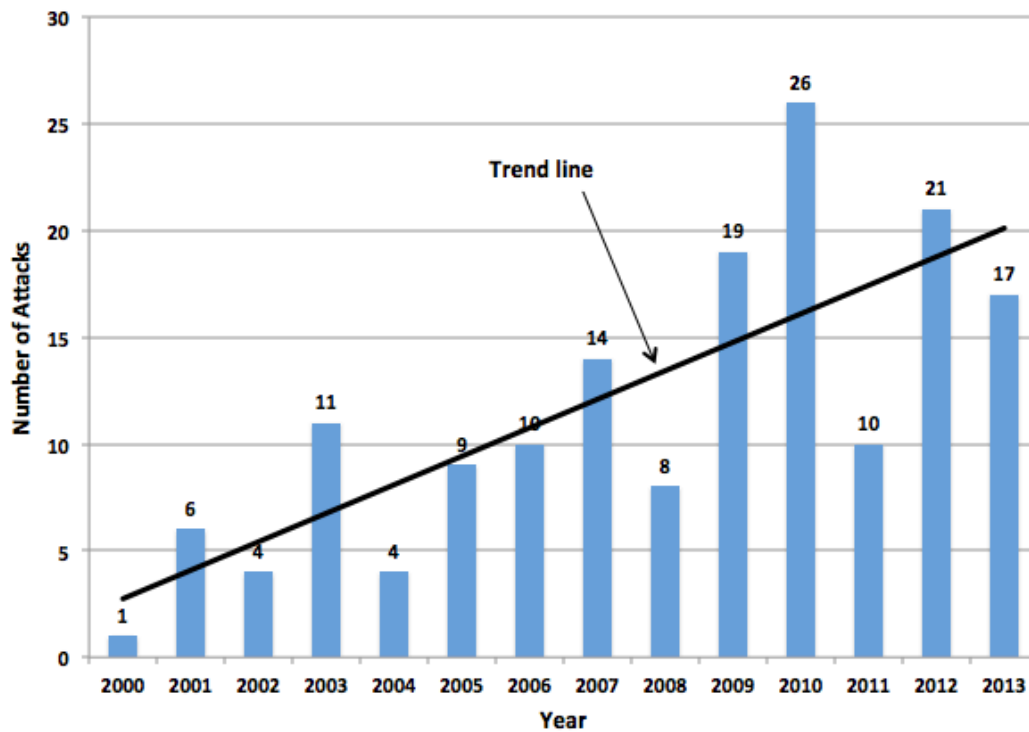
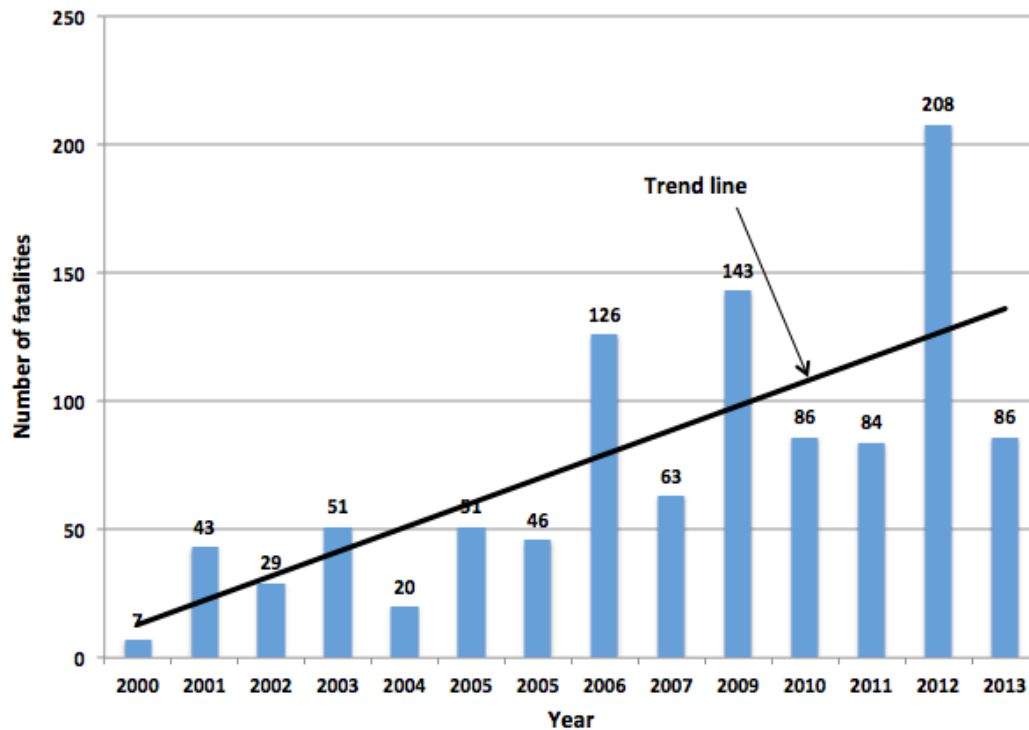


Figure 2: FBI's measure of fatalities from active shooter attacks from 2000 to 2013



Unfortunately, the FBI report engages in bait and switch and slight of hand. Mass public shootings have only increased ever so slightly over the last four decades.

While the FBI study discusses "mass shootings or killings," their graphs are based on many cases that had absolutely nothing to mass killings or even killings of any kind.

Out of the 160 cases they count from 2000 to 2013, 32 instances involved a gun being fired without a victim -- no one killed or even wounded. Another 35 cases involved one single person murdered. It is hard to see how the FBI could have erroneously included these cases, which make up 42 percent of their 160 cases, in any discussion of "mass killings." Surely they do not fit the FBI's old definition, which required four or more murders. And it does not even fit their new one of three or more murders.

These non-mass shootings, with zero or one person killed, drive much of the purported increase in the number of attacks. Out of the cases where no one or only one person was killed, 50 occur during the last seven years of the period the FBI examines and only 17 cases took place during the first seven years. In other words, the later period is padded much more heavily with these extra cases.

For example, in 2010, the FBI reports that there were 29 active shooter cases, but just 9 involve more than 1 fatality. In 2013, the FBI reports 17 attacks, but again just 9 involve more than 1 fatality.

“Though additional active shooter incidents may have occurred during this time period, the FBI is confident this research captured the vast majority of incidents falling within the search criteria.” FBI Report, page 5

Despite the FBI’s assurances, their report misses 20 shootings where at least two people were killed in a public place (see the Appendix). To put this in perspective, their data set misses 20 out of what should have been a total of 113 cases. They only report 93.

Take a few examples of what the FBI report missed:

- a Chicago, Illinois bar in 2001 by Luther Casteel that left two dead and 21 wounded;⁴
- a shooting at a Columbus, Ohio concert in 2004 by Nathan Gale that left four dead and 7 wounded;⁵
- a shooting at a St. Louis, Missouri office in 2006 by Herbert Chambers at an office that left two people dead;⁶
- and a 59-year-old businessman who killed three people at his business in St. Louis in 2013.⁷

Unfortunately, these cases were not missing at random. They were much less likely to be missing during the second half the period studied by the FBI. Indeed, these missing cases were three times more likely to occur in the first half than the second half (15 to 5). Thus, the missing observations again bias the results towards finding a larger increase over time.

Erroneously including non-mass shootings as well as omitting many mass shootings both biases the results to make it look as if attacks were increasing.

⁴ “Man Charged with deadly shootout at tavern [Elgin, Illinois],” PoliceOne.com, April 17, 2001 (<http://www.policeone.com/news/36634-Man-charged-with-deadly-shootout-at-tavern-Elgin-IL/>).

⁵ Discussion at Murderpedia for Nathan Gale (<http://www.murderpedia.org/male.G/g/gale-nathan.htm>).

⁶ Christopher Leonard, “4 dead after gunman kills his child's mother, opens fire at workplace,” Associated Press, April 19, 2006 (http://blogs.kansascity.com/crime_scene/files/4_dead_after_gunman_kills_his_childs_mother_opens_fire_at_workplace.pdf).

⁷ Crimesider Staff, “St. Louis Shooting Update: Cops ID Ahmed Dirir, 59-year-old businessman, as gunman who killed 3, then himself,” CBS News, June 14, 2013 (<http://www.cbsnews.com/news/st-louis-shooting-update-cops-id-ahmed-dirir-59-year-old-businessman-as-gunman-who-killed-3-then-himself/>).

Table 1: How the inclusion of non-mass shooting cases and missing other mass-shooting attacks biases the FBI report to show an increase in attacks over time

Year	FBI Total	Corrected Total = FBI Total - Cases with no one killed – Cases with one person killed + Cases that should have been included	Cases with no one killed	One person killed	Cases that should have been included	Averages for the first and second half of the 14 years examined by the FBI		
						Cases with no one killed	Cases where one person was killed	Cases that should have been included
2000	1	4	0	0	3			
2001	6	5	1	2	2			
2002	4	8	0	0	4			
2003	11	7	1	3	0			
2004	4	4	1	0	1			
2005	9	8	2	3	4			
2006	10	8	1	3	2	6	11	16
2007	14	11	2	2	1			
2008	8	6	2	1	1			
2009	19	9	2	8	0			
2010	26	9	10	7	0			
2011	10	7	2	1	0			
2012	21	17	4	1	1			
2013	17	11	4	4	2	26	24	5

II. Limiting the period studied to 2000 to 2013

The FBI chose the year 2000 as the starting date for the analysis. But everybody who has studied these attacks knows that 2000 and 2001 were unusually quiet years with few mass shootings. Thus, by starting with those years and padding the cases in later years with non-mass shooting attacks, the study's authors should have known perfectly well what the result would be.

For example, while the FBI claims that there was only one active shooter attack in 2000, we show that there were in fact four cases and we didn't even try to find whether they missed attacks where no one was killed or injured. By contrast, in 1999, there were 8 public shootings where at least two people were killed. Presumably, there were many more shootings where no one was killed or injured.

Fortunately, it is easy to examine a much longer period of time. Back in 2000, University of Chicago's Professor Bill Landes and then Yale Law School Research Scholar and now CPRC President John Lott put together data on mass public shootings from 1977 to

1999.⁸ In many ways the criteria that Lott and Landes set were similar to what the FBI said it would follow: non-gang attacks in public places. Shootings that were also part of some other crime, such as a robbery, were also excluded. However, Lott and Landes' examined mass shootings – cases where at least two people had been murdered in these public shootings.

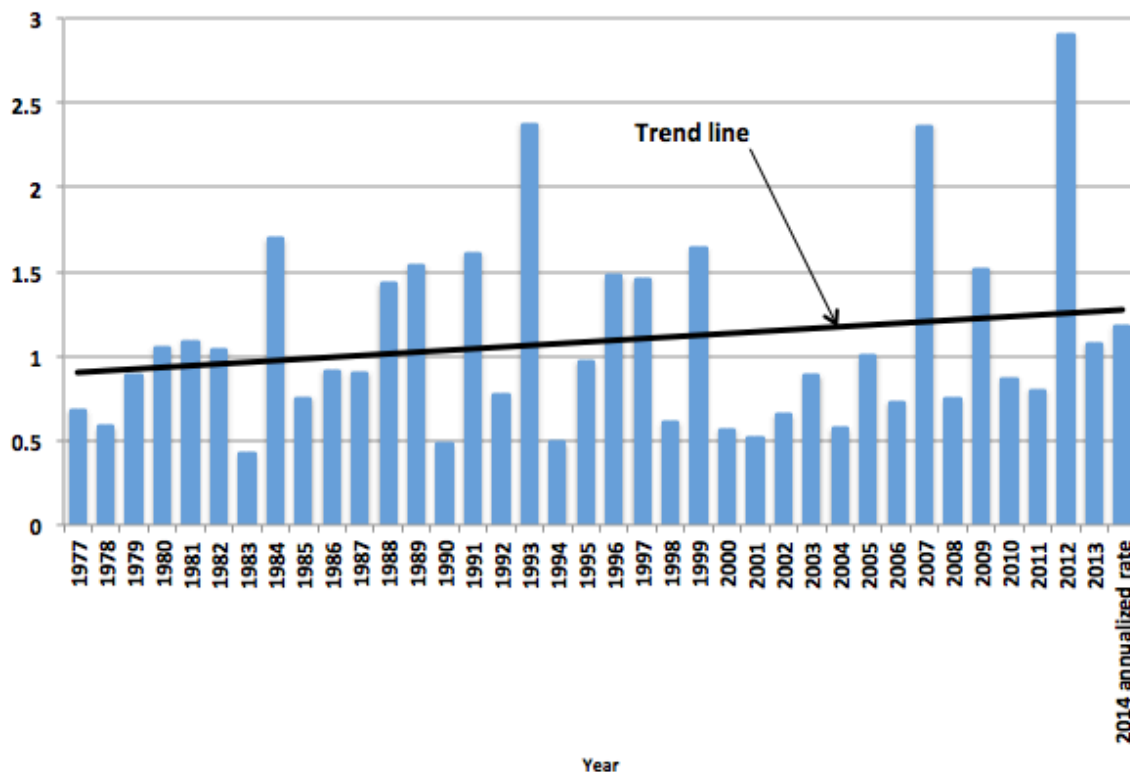
Figure 3, with the corrected data and covering the period from 1977 through the first seven months of 2014, shows the deaths from mass public shootings. There is a slight increase in deaths over these 38 years, but even that small upward trend largely depends on one highly unusual year, 2012, when 91 deaths occurred.

While the number of might have increased over time, the change is just a tiny fraction of the change claimed by FBI (see Table 2). Using the FBI data implies a statistically significant 16.4% annual increase in deaths from mass public shootings. We corrected the FBI data and only looked at cases where at least two people have been killed. Doing so cuts the annual increase in deaths from mass public shootings in half. But the real change in results occurs when the longer period of data is used. Doing that reduces the annual increase to just 0.98%, just 6% of the increase implied by the FBI data and the relationship is no longer statistically significant.

⁸ The FBI report notes (p. 5): “Specifically, shootings that resulted from gang or drug violence—pervasive, long-tracked, criminal acts that could also affect the public—were not included in this study. In addition, other gun-related shootings were not included when those incidents appeared generally not to have put others in peril (e.g., the accidental discharge of a firearm in a school building or a person who chose to publicly commit suicide in a parking lot).” The first paper to use this definition was by Lott and Landes (see John R. Lott, Jr. and William M. Landes, “Multiple Victim Public Shootings, Bombings, and Right-to-Carry Concealed Handgun Laws: Contrasting Private and Public Law Enforcement,” Social Science Research Network, April 21, 1999 (<http://ssrn.com/abstract=161637>)). See also John R. Lott, Jr. and William Landes, “Multiple Victim Public Shootings,” Social Science Research Network, October 19, 2000 (<http://ssrn.com/abstract=272929>). Some, such as the New York Times, refer to the attacks being studied here as so-called “rampage” killings. Ford Fessenden, “They Threaten, Seethe and Unhinge, Then Kill in Quantity,” New York Times, April 9, 2000 (<http://www.nytimes.com/2000/04/09/us/they-threaten-seethe-and-unhinge-then-kill-in-quantity.html?pagewanted=all>). Politifact and CNN also define these mass shootings in the same way (see <http://www.politifact.com/truth-o-meter/statements/2014/jun/13/everytown-gun-safety/have-there-been-74-school-shootings-sandy-hook-clo/> and <http://www.cnn.com/2014/06/11/us/school-shootings-cnn-number/>).

Table 2: Regression estimating the increase over time in deaths from 1977 through July 2014 (regressing the natural log of mass public shooting deaths per 10,000,000 Americans on the number of years since 1977)				
	Percent change in death rate for each additional year	t-statistics	Statistically significant	Percent size of estimate for CPRC estimate compared to estimate using FBI data
FBI Data 2000 to 2013				
All years	16.4%	4.50	Yes	
Not including 2012	15.2%	3.80	Yes	
Corrected data 2000 to 2013				
All years	8.7%	3.11	Yes	53.0%
Not including 2012	7.0%	2.45	Yes	46.1%
Corrected data 1977 to 2014				
All years	0.976%	1.38	No	6.0%
Not including 2012	0.615%	0.88	No	4.0%

Figure 3: Deaths per 10,000,000 Americans from Mass Public Shootings, at least 2 people killed per attack



III. Conclusion

Clearly, the FBI report contains significant errors. The FBI is not studying all the mass public shootings that occurred over the period of time and also pads it with non-mass shootings. Correcting their errors and focusing on mass public shootings cuts the size of the claimed annual increase in deaths in half. Using data back to 1977, collected in previous research, virtually eliminates any increase in mass public shootings. The FBI report appears to be politically driven.

Appendix: The FBI's Missing Cases: Cases of Mass Public shootings where at least two people killed

Year	Month	Day	City	State	Attacker Name	Killed in public	Wounded	Location
2000	3	2	Pittsburgh	Pennsylvania	Ronald Taylor	2	3	Restaurant
2000	3	10	Savannah	Georgia	Darrel Ingram	2	1	School
2000	4	28	Mount Lebanon	Pennsylvania	Richard Baumhammers	5	1	neighborhood
2001	1	11	Nevada County	Nevada	Scott Thorpe	3	2	county mental health office / Restaurant
2001	4	13	CHICAGO	Illinois	Luther Casteel	2	21	Bar
2002	4	6	TACOMA	Washington	Felise Kaio Jr	2	1	Bar
2002	5	31	Long Beach	California	Antonio Pineiro	2	4	Supermarket
2002	6	11	Kearney	Missouri	Lloyd Robert Jeffress	2	2	Monastery
2002	10	29	Tucson	Arizona	Robert S. Flores	3	0	School
2004	12	8	Columbus	Ohio	Nathan Gale	4	7	Concert
2005	2	24	Smith County	Texas	David Hernandez Arroyo Sr	2	4	Tyler Courthouse
2005	4	8	Eastern Shore	Maryland	Allison Lamont Norman	9	5	School and Multiple public locations
2005	12	4	FORT LAUDERDALE	Florida	Ralston Davis Jr	2	1	Multiple locations (apartment/gas station)
2006	4	19	ST. LOUIS	Missouri	Herbert Chalmers Jr	2	1	Home and Workplace
2006	9	3	Shepherdstown	West Virginia	Douglas W. Pennington	2	0	University
2007	8	6	Newark	New Jersey	Melvin Jovel	3	1	School
2008	10	26	Conway	Arkansas	Kawin Brockton, 19, Kelsey Perry, 19, Mario Tony, 20, Brandon Wade, 20	2	1	School
2012	2	21	Norcross	Georgia	Jeong Soo Paek	3	0	at the spa
2013	6	12	St. Louis	Missouri	Ahmed Dirir	3	0	Office (in a Missouri office at AK Home Health Care LLC)
2013	6	20	West Palm Beach	Florida	Javier Burgo	2	0	Alexander W. Dreyfoos School of the Arts

Academic advisory board

Chair of the Board: William M. Landes is the Clifton R. Musser Professor Emeritus of Law and Economics, and Senior Lecturer at the University of Chicago Law School. Mr. Landes has written widely on the application of economics and quantitative methods to law and legal institutions, including multiple victim public shootings, hijacking of airplanes, and the bail system. Landes has been an editor of the *Journal of Law and Economics* (1975–1991) and the *Journal of Legal Studies* (1991–2000), is past president of the American Law and Economics Association, and is a member of the American Economic Association, the Mont Pelerin Society, and the Council of Economic Advisers of the American Enterprise Institute. He is also a Fellow of the American Academy of Arts and Sciences.

Members

J. Scott Armstrong is a professor at the Wharton Business School of the University of Pennsylvania. He is internationally known for his pioneering work on forecasting methods. Most recently, his research activities have involved forecasting for terrorism and conflicts. He is author of *Long-Range Forecasting*, the most frequently cited book on forecasting methods. He is a co-founder of the *Journal of Forecasting*, the *International Journal of Forecasting*, the *International Symposium on Forecasting*, and *forecastingprinciples.com*. He is a co-developer of new methods including rule-based forecasting, causal forces for extrapolation, simulated interaction, structured analogies, and the “index method.” In addition to forecasting, Professor Armstrong has published papers on survey research, educational methods, applied statistics, social responsibility, strategic planning, and scientific peer review.

Arthur Z. Berg, M.D. is a Distinguished Life Fellow of the American Psychiatric Association and former member of the APA Violence Task Force. He was founding Psychiatrist-in-Chief at Beverly Hospital (emeritus) and former Associate Professor of Psychiatry at Harvard Medical School. A recent article that Dr. Berg had in the *Wall Street Journal* on multiple victim public shootings is available [here](#).

Tim Groseclose is the Marvin Hoffenberg Professor of American Politics at UCLA. He holds appointments in the political science and economics departments at the university. In 1987, he received his B.S. in Mathematical Sciences from Stanford University. In 1992, he received his PhD from Stanford’s Graduate School of Business. He is the author of over two dozen scholarly articles as well as the book **Left Turn: How Liberal Media Bias Distorts the American Mind**. Given the extensive media bias on guns, Professor Groseclose’s expertise on identifying media bias will be important. He contributes to the blog, www.Ricochet.com, and is an active tweeter at [@Tim_Groseclose](https://twitter.com/Tim_Groseclose) (https://twitter.com/Tim_Groseclose). You can learn more about him and his writings at www.timgroseclose.com.

Jonathan M. Karpoff is the Washington Mutual Endowed Chair in Innovation Professor of Finance at the University of Washington Foster School of Business. Karpoff has published pathbreaking research on the topics of corporate crime and punishment as well as corporate governance. He is the associate editor for the *Journal of Finance*, *Journal of Financial Economics*, *Journal of Financial and Quantitative Analysis*, *Management Science*, *Managerial and Decision Sciences*, and *The North American Journal of Economics and Finance*. He has

received a long list of academic awards.

Joyce Lee Malcolm is the Patrick Henry Professor of Constitutional Law and the Second Amendment at George Mason University Law School. She has a Ph.D. in history and is internationally known for her books **Guns and Violence: The English Experience**, Harvard University Press (November 24, 2004), and **To Keep and Bear Arms: The Origins of an Anglo-American Right**, Harvard University Press (March 2, 1996). **Guns and Violence** provides a comprehensive history and examination of changes in murder rates in England from the middle ages to the current day. She is a Fellow of the Royal Historical Society, and she has held positions at Princeton University, the Massachusetts Institute of Technology, and Cambridge University. Malcolm also served as the Director, Division of Research Programs for the National Endowment for the Humanities during 2005-2006.

Scott E. Masten is Professor of Business Economics and Public Policy in the University of Michigan Stephen M. Ross School of Business, where he has been a faculty member since 1984. A leading scholar in the area of transaction cost economics, Professor Masten's research focuses on issues at the intersection of law, economics, and organization. In addition to his primary appointment, he has held appointments as the Louis and Myrtle Moskowitz Research Professor in Business and Law at Michigan, John M. Olin Faculty Research Fellow at Yale Law School, John M. Olin Distinguished Visiting Professor of Law at the University of Virginia Law School, and Visiting Professor in the University of Michigan Law School. He was President of the International Society for New Institutional Economics in 2008-09, is a co-editor of the Journal of Economics & Management Strategy, and serves on the editorial boards of the Journal of Law, Economics & Organization and Managerial and Decision Economics

Carl Moody, Professor of Economics, William & Mary. Professor Moody has published extensively on the relationships between guns, crime and imprisonment in such academic journals as Criminology, Homicide Studies, the Journal of Law and Economics, the Journal of Legal Studies, and the Journal of Quantitative Criminology. He teaches mathematical economics and econometrics.

J. Mark Ramseyer is the Mitsubishi Professor of Japanese Legal Studies at Harvard University Law School. Prior to coming to Harvard, Mark held tenured positions at the University of Chicago and UCLA and visiting positions at such places as the University of Tokyo, University of Virginia, Tel Aviv University, and University of Haifa. Among the vast array of topics that he has studied, he is an expert on the Japanese legal system including criminal law. In the field of criminal law and procedure, he has studied the relation between prosecutorial behavior, prosecutorial budgets, and conviction rates; the structure of the Japanese judiciary and its effect on the adjudication of politically charged cases; the relation between judicial background and the imposition of the death penalty; and the relation between court structure and conviction rates.

Paul H. Rubin is the Samuel Candler Dobbs Professor of Economics at Emory University, and Editor in Chief of Managerial and Decision Economics. He has been president of the Southern Economic Association. His research interests have included crime, the death penalty, and gun control. He received his B.A. from the University of Cincinnati in 1963 and his Ph.D. from Purdue University in 1970. He is a Fellow of the Public Choice Society, a Senior Fellow at the Progress and Freedom Foundation, an Adjunct Scholar at the American Enterprise Institute and the Georgia Public Policy Foundation, and former Vice President of the Southern Economics

Association. Dr. Rubin has been Senior Staff Economist at President Reagan's Council of Economic Advisers, Chief Economist at the U.S. Consumer Product Safety Commission, Director of Advertising Economics at the Federal Trade Commission, and vice-president of Glassman-Oliver Economic Consultants, Inc., a litigation consulting firm in Washington.