

## Response to the NRA---June 2007

In the June 2007 edition of “American’s First Freedom,” a publication of the National Rifle Association, the editorial staff has an article entitled “Harvard University, Snake Oil Research, Buyer Beware.” The article devotes three pages to attacking our research. We are pleased that the editorial staff may have read at least two of the scores of peer-reviewed journal articles that we have written on firearms issues.

**I** In our state homicide study (Miller M, Hemenway D, Azrael D. State-level homicide victimization rates in the US in relation to survey measures of household firearm ownership, 2001-2003. *Social Science & Medicine*, 2007; 656-64), we find that in states with higher rates of household firearm ownership, there are higher rates of firearm homicide and overall homicide. There is no relationship between household firearm ownership and non-firearm homicide.

The main criticism of that study by the editorial staff is that we used only a portion of the available data. “A Red Flag should always go up when researchers use only a fraction of the data available. Researchers should always use all data available, or they had better have a darned good reason not to do so.” What additional data did they want us to use?

(1) “The ‘researchers’ didn’t include, or even discuss, the District of Columbia.”

**Response:** The study compares homicide across U.S. states. We look at data from all 50 states. The District of Columbia is not a state. Nonetheless, including the District of Columbia does not affect our results.

(2) “Hemenway, Miller and Azrael use estimates of gun ownership by state from a 2001 survey by the Centers for Disease Control and Prevention, and related those estimates to homicide rates....There are a number of points one immediately notices about this study. First, 2001 wasn’t the only year that CDC did its survey—there were identical surveys for all the United States in 2002 and 2004, though the data wasn’t used...Did Hemenway, Miller and Azrael just happen to randomly pick the survey data from the year that best worked to ‘prove’ their case? Who knows, but it sure looks suspicious. It is very hard to think of a valid reason for only looking at survey data for 2001 and not the other years, which were more recent.”

**Response:** The study examined the state homicide rates for the years 2001-2003. It would not be appropriate to use the 2004 gun prevalence data. Having a gun in 2004 does not make it available for causing or preventing a homicide in 2001. As we write in the limitations section of the paper: “Although our outcome data (homicide) do not precede our exposure data, we nevertheless use household firearm measures from 2001 to assess homicide not only in 2001, but in 2002 and 2003. The effect of this temporal discrepancy on our results is likely to be small since guns are highly durable. In fact, the correlation coefficient relating state level household firearm ownership from the BRFSS in 2001 compared to 2002 is 0.99.” Using either estimate does not affect our results. Nor, as we explain in the paper, are the results different if we use the 2001 gun prevalence data and examine only the 2001 homicide data.

(3) “If you look at homicide, murder or overall violent crime, and also account for something as obvious as the corresponding arrest rate for those crimes, there is always a negative relationship between those crimes and gun ownership.”

**Response:** We controlled for rates of aggravated assault, robbery, unemployment, urbanization, alcohol consumption, and resource deprivation. It would not be appropriate to control for the homicide arrest rate. Homicide arrests do not explain homicides. The causal explanation is in the opposite direction. Where there are more homicides, we expect there to be more homicide arrests.

**II** In the other study discussed, we examined correlates of road rage. Specifically, we looked at two behaviors—made an obscene or rude gesture at another driver, and a more serious behavior, aggressively followed another vehicle too closely. We found that in a survey of over 2,400 licensed drivers, “males, young adults, binge drinkers, those who do not believe most people can be trusted, those ever arrested for a non-traffic violation, and motorists who had been in a vehicle in which there was a gun were more likely to engage in such forms of road rage.” (Hemenway D, Vrinotis M, Miller M. Is an armed society a polite society? Guns and road rage. *Accident Analysis and Prevention*. 2006; 38:687-95).

(1) The editorial staff at America’s First Freedom state that we “claim that carrying a gun in one’s car causes road rage.”

**Response:** We made no such claim. Our study can’t determine causality. We state: “similar to the evidence from Arizona, riding with a firearm in the vehicle appears to be a marker for aggressive and dangerous driver behavior.”

(2) The editorial staff writes: “Hemenway, Miller and Azrael (sic) believed that their study proved that Right-to-Carry laws caused people to behave dangerously and thus directly led to people shooting or threatening others with a gun.”

**Response:** We say nothing along those lines. No variable in our analysis has anything to do with Right-to-Carry Laws, or shooting people or threatening anyone with a gun.

(3) The editorial staff writes: “Something that the authors apparently didn’t notice themselves, was that their results actually showed that ‘liberals’ were even more likely to engage in road rage than ‘conservatives’ (both in terms of making obscene gestures and driving aggressively) and that factor was more important than whether one had a gun in her or her car in the past years. If the researchers had noticed this result, would they have opposed both liberals driving cars as well as guns in cars?” This claim is virtually identical to what John Lott wrote on his website in February 2006, except that he asked whether we would have opposed “gun owners being allowed to drive cars.”

**Response:** Table 1 of our paper shows that in terms of aggressive following: it is 11% of liberals and 9% of conservatives (not a statistically significant difference). By contrast, the difference in terms of aggressively following between those who road with a gun in the car (14% aggressively followed) and those who never road with a gun in the car (8% aggressively followed) is much wider and statistically significance. There is no expressed concern in the paper about gun owners being allowed to drive cars. However, if a motorist has become so enraged that he aggressively follows another vehicle, it

probably matters little for public health and safety whether he is a liberal or conservative. It may matter a lot whether or not this angry and out-of-control motorist has a gun.

**III Data sharing:** “Despite all the publicity, their work has been shrouded in secrecy; they have made it particularly difficult for other researchers to carefully scrutinize their work. Other researchers have not been allowed to look at their data. Since they won’t release survey data even *eight years* (italics in original) after the survey has been completed, and five years after their last research paper using the data was published, it is hardly surprising that they refuse to release their data for other studies, such as the one on road rage, when they start getting news coverage.” “It is understandable when they say they are unable to release part of their data due to its having been lost.” “Hemenway, Miller and Azrael’s ... consistent unwillingness to share data...”

**Response:**

(1) None of our data has ever been lost.

(2) We are not completely sure what eight-year old data the editors are referring to. Data from the only other road rage study we were involved in come from the Grand Canyon State Poll, a random-digit dial telephone survey of licensed drivers in Arizona, conducted at the Social Research Laboratory at the Northern Arizona University in 1999. (Miller M, Azrael D, Hemenway D. Road rage in Arizona: armed and dangerous. *Accident Analysis and Prevention*. 2002; 34:807-814). We had nothing to do with conducting that survey. The data are available from the Social Research Laboratory.

Perhaps what is meant are the national random digit dial surveys of over 1,900 and 2,500 adults conducted for us by a survey firm in 1996 and 1999. These data have been available at the University of Michigan data website. The other data we have used for our studies came from publicly available data sources.

(3) The only person to ever ask us directly for a data set is John Lott. After our road rage article was published in 2006, he demanded the data, which were from a 2004 national random digit dial survey we conducted of over 2,750 adults. As we explained to him, the data would be made publicly available in 2007. We wrote two successful grant proposals to get the funds to sponsor that national survey on firearms, conduct analyses on the data, and write peer-reviewed journal articles. We created the survey instrument, obtained Human Subjects approval and contracted with a professional survey firm. We were in the process of writing journal articles. Seven researchers were involved in the project, along with graduate students writing papers using the data.

Dr. Lott’s blog at the time, implied an unwillingness by us to ever share the data. That was and is false. In public health and many other fields, the general rule is that the research team that did the initial work will have a grace period during which they exclusively keep the data for their own research. Like a patent, this provides an incentive to write the grants and collect the data. After a suitable period, research teams make the data available to other researchers. We have been busy writing journal articles from the data (the road rage article was the first). The data will be made publicly available this year.

There was a discussion among the seven researchers here about whether an exception might be made for Dr. Lott. That discussion ended quickly once it became clear how our road rage study was being misinterpreted on Dr. Lott's blog. As but one example, Dr. Lott incorrectly wrote: "While one regression with a few very basic variables was apparently run (but not shown), no explanation was offered for why such a limited set of control variables were used (e.g., why not trouble with law enforcement, education, income, smoker, race). Trouble with law enforcement (past arrests) would have been obvious."

Fortunately, the article was available to others, so there was a correcting mechanism. On his Website, Tim Lambert wrote correctly: "Actually, table 1, which fills an *entire page* of the paper presents a multivariate regression using all 15 variables including trouble with law enforcement, education, income, smoker and race. And even if he [Lott] skipped over that page, the results of the multivariate regression are mentioned several times in the text."

We decided that the data would be made available to everyone at the same time.

**IV** None of the various criticisms of our work in the article is either correct or justified.

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