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RECENT DEVELOPMENTS

DO EXECUTIONS LOWER HOMICIDE RATES?: THE VIEWS OF LEADING CRIMINOLOGISTS*

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> For centuries the death penalty, often accompanied by barbarous refinements, has been trying to hold crime in check; yet crime persists. Why? Because the instincts that are warring in man are not, as the law claims, constant forces in a state of equilibrium.
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> —Albert Camus[1]

The question of whether the death penalty is a more effective deterrent than long-term imprisonment has been debated for decades or longer by scholars, policy makers, and the general public. In this Article we report results from a survey of the world's leading criminologists that asked their expert opinions on whether the empirical research supports the contention that the death penalty is a superior deterrent. The findings demonstrate an overwhelming consensus among these criminologists that the empirical research conducted on the deterrence question strongly supports the

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[1] ALBERT CAMUS, *Reflections on the Guillotine*, *in* RESISTANCE, REBELLION, AND DEATH 175, 190 (Justin O'Brien trans., 1972) (1961).

conclusion that the death penalty does not add deterrent effects to those already achieved by long imprisonment.

I. INTRODUCTION

Ever since a young Edwin Sutherland first published research on the issue in 1925,[2] criminologists have been interested in the question of whether the death penalty is a more effective deterrent to criminal homicide than long-term imprisonment. At least until a decade ago, there was widespread consensus among criminologists that the death penalty could not be justified on deterrence grounds. In November 1989, in part because "social science research ha[d] found no consistent evidence of crime deterrence through execution," the American Society of Criminology passed a resolution condemning the death penalty, one of only two public policy positions the organization has ever taken.[3] In 1996, Radelet and Akers surveyed sixty-seven leading American criminologists regarding their opinion about the empirical research on deterrence and found that the overwhelming majority of the experts agreed that the death penalty never has been, is not, and never could be superior to long prison sentences as a deterrent to criminal violence.[4]

The research reported in this Article was designed to update the 1996 study and assess if any recent deterrence studies have modified the beliefs of the world's leading criminologists. The results indicate that only a small minority of top criminologists—10% or less, depending on how the question is phrased—believes that the weight of empirical research studies supports the deterrence justification for the death penalty.

These results come despite the publication of several widely-cited studies conducted in the last half dozen years (primarily by economists) that claim to show the death penalty has deterrent effects that criminologists have not spotted.[5] In 2002, the *Washington Post* published an article under the catchy title *Murderous Pardons?* about research by econometrician Naci Mocan purporting to find that each execution led to 5-6 fewer homicides, and for every three additional "pardons" of a death row inmate,

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[2] That seminal research was published in the pages of this Journal. E.H. Sutherland, *Murder and the Death Penalty*, 15 J. AM. INST. CRIM. L. & CRIMINOLOGY 522 (1925).

[3] Am. Soc'y of Criminology, Policy Positions, http://www.asc41.com/policyPositions.html (last visited Mar. 15, 2009).

[4] Michael L. Radelet & Ronald L. Akers, *Deterrence and the Death Penalty: The Views of the Experts*, 87 J. CRIM. L. & CRIMINOLOGY 1, 10 (1996).

[5] Abstracts of these papers have been collected by the Criminal Justice Research Foundation, a group that supports the death penalty. *See* Criminal Justice Legal Found., Articles on Death Penalty Deterrence, http://www.cjlf.org/deathpenalty/DPDeterrence.htm (last visited Mar. 15, 2009).

there were 1-1.5 additional homicides.[6] A few months later, Emory University economist Paul H. Rubin and his colleagues began to publicize their work which found that each execution deterred approximately eighteen homicides.[7] Later that year, Dale Cloninger and Roberto Marchesini, economists in the School of Business Administration at the University of Houston, published a letter in the *Wall Street Journal* claiming that their research showed that each execution in Texas prevented between eleven and eighteen homicides.[8] In 2007, Professors Roy Adler and Michael Summers (a professor of Marketing and a professor of Quantitative Methods at Pepperdine University, respectively)[9] published an op-ed in the *Wall Street Journal* claiming that their data showed each execution in the United States, from 1979-2004, prevented some seventy-four murders in the following year.[10] By late 2007, an article on the front page of the *New York Times* entitled *Does the Death Penalty Save Lives? A New Debate* announced that the recent articles on deterrence were "setting off an intense new debate about one of the central justifications for capital punishment."[11]

Are these new studies really "setting off an intense new debate"? What should the general public conclude about this morass of conflicting results and opinions? To be sure, most of the recent research that purports to find a deterrent effect has been critiqued (as we will discuss below), but that still leaves the layperson trying to decide between "he said, she said" exchanges and complex statistical debates that few can understand. Therefore, we decided to find some sort of answer by replicating the study conducted a dozen years ago by Michael Radelet and Ronald Akers in which they surveyed sixty-seven leading criminologists to see if there was consensus on whether the death penalty was superior as a deterrent to long-

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[6] *Murderous Pardons?*, WASH. POST, Jan. 20, 2002, at B5. These estimates were slightly revised by the time the study was published. H. Naci Mocan & R. Kaj Gittings, *Getting off Death Row: Commuted Sentences and the Deterrent Effect of Capital Punishment*, 46 J.L. & ECON. 453, 474 (2003) (finding that "[e]ach additional execution decreases homicides by about five, and each additional commutation increases homicides by the same amount.").

[7] Paul H. Rubin, *Death Penalty Deters Scores of Killings*, ATLANTA J. CONST., Mar. 14, 2002, at 22A.

[8] Dale O. Cloninger & Roberto Marchesini, Letter to the Editor, *Scientific Data Support Executions' Effect*, WALL ST. J., June 27, 2002, at A21.

[9] Pepperdine Univ., Meet the Faculty, http://seaver.pepperdine.edu/academics/faculty/member.htm?facid=roy_adler (last visited Mar. 15, 2009); Pepperdine Univ., Meet the Faculty, http://seaver.pepperdine.edu/academics/faculty/member.htm?facid=michael_summers (last visited Mar. 15, 2009).

[10] Roy D. Adler & Michael Summers, *Capital Punishment Works*, WALL ST. J., Nov. 2, 2007, at A13.

[11] Adam Liptak, *Does the Death Penalty Save Lives?: A New Debate*, N.Y. TIMES, Nov. 18, 2007, at A1.

term imprisonment. In this study, we use a different sample of expert criminologists to see if the opinions of the country's top criminologists have changed.

II. BACKGROUND

The importance of the deterrence justification for capital punishment has declined precipitously in recent years among the general public. In the mid-twentieth century[12] and up through the 1970s, it was unquestionably the top argument in favor of executions.[13] In a 1985 Gallup Poll, 62% of the respondents answered *yes* to the question, "Do you feel that the death penalty acts as a deterrent to the commitment of murder, that it lowers the murder rate, or not?"[14] This fell to 34% in 2006,[15] when the question was last asked. Conversely, the proportion of respondents who stated that the death penalty was *not* a deterrent doubled by 2004, from 31% to 62%.[16] Similarly, a 1995 national survey of nearly 400 police chiefs and county sheriffs found that two-thirds did not believe the death penalty significantly lowered the number of murders.[17]

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[12] As one criminologist wrote in 1952, "The most frequently advanced and widely accepted argument in favor of the death penalty is that the threat of its infliction deters people from committing capital offenses." Robert G. Caldwell, *Why Is the Death Penalty Retained?*, 284 ANNALS AM. ACAD. POL. & SOC. SCI. 45, 50-51 (1952).

[13] *See, e.g.*, Ernest van den Haag, *On Deterrence and the Death Penalty*, 60 J. CRIM. L. CRIMINOLOGY & POLICE SCI. 141 (1969); Hugo Adam Bedau, *Deterrence and the Death Penalty: A Reconsideration*, 61 J. CRIM. L. CRIMINOLOGY & POLICE SCI. 539 (1970) (responding to Ernest van den Haag's paper).

[14] *See infra* App. A, Question 1. This question suffers from unusually poor wording. The death penalty might deter some murders, but it could also stimulate others. *See, e.g.*, William J. Bowers & Glenn L. Pierce, *Deterrence or Brutalization: What Is the Effect of Executions?*, 26 CRIME & DELINQ. 453, 481 (1980) (finding that in the state of New York, every execution leads on average to two additional homicides in the following month). Furthermore, the proper question for public policy is the death penalty's *marginal* deterrent effect—that is, whether it deters homicides over and above the deterrent effect of life imprisonment without parole.

[15] Jeffery M. Jones, *Support for the Death Penalty 30 Years After the Supreme Court Ruling*, GALLUP NEWS SERV., June 30, 2006, *available at* http://www.gallup.com/poll/23548/Support-Death-Penalty-Years-After-Supreme-Court-Ruling.aspx (last visited Mar. 15, 2009); Gallup, Inc., Death Penalty, http://www.gallup.com/poll/1606/Death.Penalty.aspx (last visited Mar. 15, 2009).

[16] David W. Moore, *Public Divided Between Death Penalty and Life Imprisonment Without Parole*, GALLUP NEWS SERV., June 2, 2004, http://www.gallup.com/poll/11878/Public-Divided-Between-Death-Penalty-Life-Imprisonment-Without-Parole.aspx.

[17] Richard C. Dieter, *On the Front Line: Law Enforcement Views on the Death Penalty*, DEATH PENALTY INFO. CTR., Feb. 1995, http://www.deathpenaltyinfo.org/article.php?did=545&scid=45.

No doubt part of this declining support for the deterrence hypothesis is a consequence of empirical research by criminologists. Led by the pioneering work of Thorsten Sellin,[18] scores of researchers have examined the possibility that the death penalty has a greater deterrent effect on homicide rates than does long-term imprisonment.[19] While some econometric studies in the 1970s claimed to find deterrent effects,[20] these studies were exhaustively criticized and largely discredited.[21] A panel set up by the National Academy of Sciences and chaired by Nobel Laureate Lawrence R. Klein to examine the studies—primarily those published by economist Isaac Ehrlich—concluded that "the available studies provide no useful evidence on the deterrent effect of capital punishment" and "research on the deterrent effects of capital sanctions is not likely to provide results that will or should have much influence on policy makers."[22] In retrospect, that finding seemed to settle the scholarly debate, at least for the next twenty-five years.

A. THE MOCAN-GITTINGS STUDY

Against this background, the article entitled *Murderous Pardons?* that was published by the *Washington Post* in 2002 raised the eyebrows of many criminologists.[23] The study discussed in the article was authored by University of Colorado-Denver economist Naci Mocan[24] and one of his (then) graduate students, Kaj Gittings.[25] They examined 6,143 death

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[18] THORSTEN SELLIN, THE DEATH PENALTY (1959).

[19] For reviews of this literature, see ROBERT M. BOHM, DEATHQUEST III: AN INTRODUCTION TO THE THEORY AND PRACTICE OF CAPITAL PUNISHMENT IN THE UNITED STATES 175-200 (3d ed. 2007); ROGER HOOD & CAROLYN HOYLE, THE DEATH PENALTY: A WORLDWIDE PERSPECTIVE 317-49 (4th ed. 2008); RAYMOND PATERNOSTER ET AL., THE DEATH PENALTY: AMERICA'S EXPERIENCE WITH CAPITAL PUNISHMENT 138-48 (2008); FRANK E. ZIMRING & GORDON HAWKINS, CAPITAL PUNISHMENT AND THE AMERICAN AGENDA 167-86 (1986); Ruth D. Peterson & William C. Bailey, *Is Capital Punishment an Effective Deterrent for Murder? An Examination of Social Science Research*, *in* AMERICA'S EXPERIMENT WITH CAPITAL PUNISHMENT 251 (James R. Acker et al. eds., 2d ed. 2003).

[20] *See, e.g.*, Isaac Ehrlich, *The Deterrent Effect of Capital Punishment: A Question of Life and Death*, 65 AM. ECON. REV. 397 (1975).

[21] *See, e.g.*, Lawrence R. Klein et al., *The Deterrent Effect of Capital Punishment: An Assessment of the Estimates*, *in* PANEL ON RESEARCH ON DETERRENT & INCAPACITATIVE EFFECTS, DETERRENCE AND INCAPACITATION: ESTIMATING THE EFFECTS OF CRIMINAL SANCTIONS ON CRIME RATES 336 (Alfred Blumstein et al. eds., 1978).

[22] Panel on Research on Deterrent & Incapacitative Effects, *summary* of DETERRENCE AND INCAPACITATION: ESTIMATING THE EFFECTS OF CRIMINAL SANCTIONS ON CRIME RATES 3, 9, 12 (Alfred Blumstein et al. eds., 1978).

[23] *See supra* note 6 and accompanying text.

[24] In 2007, Professor Mocan joined the faculty at Louisiana State University. *See* H. Naci Mocan, CV, http://www.bus.lsu.edu/mocan/cv.html (last visited Mar. 15, 2009).

[25] Mr. Gittings, a labor economist, is currently a Ph.D. candidate in Economics at Cornell

sentences imposed in the United States between 1977 and 1997, and built a data set with 1,050 observations (one observation per state for twenty-one years).[26] Their results indicated that each execution resulted in five fewer homicides, and each commutation[27] of a death sentence to a long or life prison term resulted in five additional homicides.[28] Further, each additional removal from death row—primarily occurring when appellate courts vacate death sentences that were imposed with various improprieties by trial courts—resulted in one additional homicide.[29]

At least two prominent criminologists have found serious flaws in the Mocan-Gittings work. Richard Berk noted that the execution figures by state by year for the 1977 to 1997 period were highly skewed.[30] Berk specifically noted that most states—accounting for 859 of the 1,000 observations[31]—had zero executions in a given year, and only a few states had more than a handful in a few years (n=11), with most of these being from Texas.[32] He used a straightforward procedure to assess the implications of this skewed measure: using Mocan and Gittings's original data set, he removed the Texas data and ran the model exactly as the original authors did, albeit only for the other forty-nine states.[33] The deterrent effect of executions disappeared.[34] Berk concluded that "it would

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University. *See* R. Kaj Gittings Home Page, http://www.people.cornell.edu/pages/rkg8/ (last visited Mar. 15, 2009).

[26] Mocan & Gittings, *supra* note 6.

[27] The title of the draft released to the *Washington Post* was *Pardons Executions and Homicide*, reflecting the fact that the authors did not appreciate the distinction between "pardon" and "commutation." This was changed only after one of the present authors, Michael L. Radelet, called it to the attention of Professor Mocan. Their work does not suggest any theoretical link that might explain how either pardons or commutations might affect those who are contemplating a murder. E-mail from Michael L. Radelet, Professor and Chair, Dep't of Sociology, Univ. of Colo.-Boulder, to H. Naci Mocan, Professor and Chair, Dep't of Econ., Univ. of Colo.-Denver (Feb. 2, 2002, 14:25 MST) (on file with author).

[28] Mocan & Gittings, *supra* note 6, at 474 & n.26.

[29] *Id.*

[30] Richard Berk, *New Claims About Executions and General Deterrence: Déjà Vu All over Again?*, 2 J. EMPIRICAL LEGAL STUD. 303 (2005).

[31] Although Mocan and Gittings begin with 1050 observations, they "lag" the effect of executions by one year. That is, an execution in one year is hypothesized to have an effect on homicide rates in the next year. Because of this, there are 1000 observations to analyze, not 1050. *See* Berk, *supra* note 30, at 305.

[32] Of the 1138 executions in the United States between 1976 and the end of 2008, 423, or 37%, occurred in Texas. These computations relied on data extracted from the Death Penalty Information Center's searchable, on-line database. Death Penalty Info. Ctr., Searchable Execution Database, http://www.deathpenaltyinfo.org/executions (last visited Mar. 15, 2009).

[33] Berk, *supra* note 30, at 320-24.

[34] "[O]ne must not take this as evidence for deterrence in Texas. There are not enough

be bad statistics and bad social policy to generalize from the 11 observations to the remaining 989."[35]

A second reexamination of the Mocan-Gittings study was conducted by Jeffrey Fagan.[36] Fagan's work is the most comprehensive review of the theoretical and methodological shortcomings of deterrence studies published after 2000. He first improved Mocan's measure of deterrence, which is the number of executions in a given state divided by the number of death sentences imposed six years earlier.[37] Because of the impossibility of computing this measure if the denominator is zero, Mocan and Gittings coded years with no death sentences as .99.[38] Fagan reanalyzed the data using .01 (which is closer to zero) in the denominator rather than .99. That simple improvement made *all* the deterrent effects found by Mocan and Gittings disappear.[39]

Furthermore, Fagan noted that potential offenders are unlikely to remember the number of death sentences imposed in their states six or seven years prior to their crime.[40] Instead, he computed a variable measuring deterrence by calculating the number of executions in the previous year divided by the number of death sentences handed down *two* years earlier (rather than six). Again, this minor adjustment makes the deterrent effect observed by Mocan and Gittings disappear.

Fagan also showed that alternative statistical models that consider the strong correlation of homicide rates from year to year within a given state also produce results that eliminate any deterrent effects.[41] In addition, because the data set used by Mocan and Gittings to count homicides has wide gaps with missing data, Fagan used Morbidity and Mortality data from the National Center for Health Statistics to improve the measure of

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data to judge for any single state, even Texas." *Id.* at 324.

[35] *Id.* at 328.

[36] *An Examination of the Death Penalty in the United States: Hearing Before the Subcomm. on the Constitution, Civil Rights and Property Rights of the S. Comm. on the Judiciary*, 109th Cong., 2d Sess. 21-35 (2006) [hereinafter *Death Penalty Hearing*] (statement of Jeffrey Fagan, Professor of Law and Public Health, Columbia University), *available at* http://www.access.gpo.gov/congress/senate/pdf/109hrg/29599.pdf; Ethan Cohen-Cole et al., *Model Uncertainty and the Deterrent Effect of Capital Punishment*, AM. L. & ECON. REV. (forthcoming 2009); Jeffrey Fagan, *Death and Deterrence Redux: Science, Law and Causal Reasoning on Capital Punishment*, 4 OHIO ST. J. CRIM. L. 255 (2006); *see also* Jeffrey Fagan et al., *Capital Punishment and Capital Murder: Market Share and the Deterrent Effects of the Death Penalty*, 84 TEX. L. REV. 1803 (2006).

[37] Fagan, *supra* note 36, at 309.

[38] *Id.*

[39] *Id.*

[40] *Id.* at 310.

[41] *Id.* at 311-13.

homicides.[42] Again, these minor adjustments and corrections eliminated the relationship between executions and homicide rates.

Rather than prove that Mocan and Gittings erred in their assumptions, Fagan showed that small changes in their assumptions could produce wild fluctuations in their deterrence estimates. For instance, a small change could cause a positive deterrence effect, no deterrence effect, or even the brutalization effect, in which each execution increases the homicide rate.[43] Unfortunately, Mocan and Gittings have not responded to Berk's and Fagan's critiques.

B. THE EMORY STUDIES

Another set of studies has received widespread media attention,[44] namely those of Emory University scholars Paul Rubin, Joanna Shepherd,[45] and Hashem Dezhbakhsh (collectively the Emory group). The Emory group has published four major works on the subject.[46]

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[42] *Id.* at 308.

[43] *See id.* at 310-13 ("These analyses were designed neither to contradict the results shown by [Mocan and Gittings], nor were they intended as a critique of [Mocan and Gittings]. Rather, these results illustrate the sensitivity and volatility of estimates of the deterrent effects of capital punishment on homicide.").

[44] Some of this media attention has been self-cultivated. *See, e.g.*, Rubin, *supra* note 7; Paul H. Rubin, *The Death Penalty and Deterrence*, PHI KAPPA PHI F., Winter 2002, at 10-12; Joanna Shepherd, Op-Ed., *Why Not All Executions Deter Murder*, CHRISTIAN SCI. MONITOR, Dec. 14, 2005, at 9.

[45] Professors Mocan, Dezhbakhsh, and Shepherd take the position that even if the death penalty deters homicide, that does not resolve the public policy question of whether we should retain the death penalty. In 2007, Mocan was quoted as saying, "I oppose the death penalty. But my results show that the death penalty (deters) . . . what am I going to do, hide them?" Robert Tanner, *Studies Say Death Penalty Deters Crime*, WASH. POST, June 11, 2007, http://www.washingtonpost.com/wp-dyn/content/article/2007/06/11/AR2007061100406.html (omission in original). Dezhbakhsh and Shepherd write, "This convincing evidence for the deterrent effect does not necessarily indicate that capital punishment is sound social policy . . . . Policy makers much weigh the benefits and costs to determine the optimal use of the death penalty. Hashem Dezhbakhsh & Joanna M. Shepherd, *The Deterrent Effect of Capital Punishment: Evidence from a "Judicial Experiment,"* 44 ECON. INQUIRY 512, 533 (2006). This position was criticized for its dependence on studies that had found a deterrent effect by even hypothetically accepting the conclusions. *See, e.g.*, John J. Donohue & Justin Wolfers, *Uses and Abuses of Empirical Evidence in the Death Penalty Debate*, 58 STAN. L. REV. 791, 793 (2005). Sunstein later clarified his position, stating that "the best reading of the accumulated data is that they do not establish a deterrent effect of the death penalty." Cass R. Sunstein & Justin Wolfers, *A Death Penalty Puzzle: The Murky Evidence for and Against Deterrence*, WASH. POST, June 30, 2008, at A11.

[46] Two of these authors have also testified in front of congressional committees. *Death Penalty Hearing*, *supra* note 36, at 19-21, 125-33 (statement of Paul H. Rubin, Professor of Economics & Law, Emory University); *Terrorist Penalties Enhancement Act of 2003: Hearing on H.R. 2934 Before the Subcomm. on Crime, Terrorism, and Homeland Security of*

The first study by the Emory group used data from 3,054 counties covering the period from 1997 to 1996 and concluded that both death sentences and executions tend to lower the homicide rate.[47] The study estimated that each execution leads to eighteen fewer murders.[48]

The second Emory study, by Joanna Shepherd, used monthly murder and execution data from 1977 to 1999 and concluded that each death sentence led to 4.5 fewer murders and each execution resulted in three fewer murders.[49] Surprisingly, Shepherd found that executions had the greatest effect on murders of passion and those between friends and families, compared to murders between strangers.[50] Shepherd also found that shorter stays on death row led to one fewer murder for every 2.75 fewer years that a convict remains on death row before execution.[51] The study did not specify precisely how potential murderers know how long inmates stay on death row before their executions. It follows that consensual executions, which occur when inmates shorten their time on death row by forfeiting their right to appeal, have a greater deterrent effect than nonconsensual executions.

The third paper from the Emory group studies the effects of the moratorium on executions in the United States from June 1967 to January 1977.[52] The Emory group used data from all fifty states from 1960 to 2000, and found that 91% of the states had higher homicide rates after they suspended the death penalty.[53] Conversely, 70% of the states saw homicides decrease after the death penalty was reinstated.[54]

The final paper from the Emory group found that the deterrent effect of capital punishment is limited to the states that executed nine or more prisoners from 1977 to 1996.[55] In the states that executed fewer than nine

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the H. Comm. on the Judiciary, 108th Cong., 2d Sess. 9-16 (2004) (statement of Joanna Shepherd, Professor, Emory University Law School), *available at* http://frwebgate.access.gpo.gov/cgibin/getdoc.cgi?dbname=108_house_hearings&docid=f:93224.pdf.

[47] Hashem Dezhbakhsh et al., *Does Capital Punishment Have a Deterrent Effect? New Evidence from Postmoratorium Panel Data*, 5 AM. L. & ECON. REV. 344, 359, 373 (2003).

[48] *Id.* at 369.

[49] Joanna M. Shepherd, *Murders of Passion, Execution Delays and the Deterrence of Capital Punishment*, 33 J. LEGAL STUD. 283, 304, 308 (2004).

[50] *Id.* at 308.

[51] *Id.* at 314-15.

[52] Dezhbakhsh & Shepherd, *supra* note 45, at 512.

[53] *Id.* at 516, 521.

[54] *Id.* at 522.

[55] Joanna Shepherd, *Deterrence Versus Brutalization: Capital Punishment's Differing Impacts Among States*, 104 MICH. L. REV. 203, 205-06 (2005), *discussed in* Shepherd, *supra* note 49.

prisoners, there was either no deterrent effect or else the homicide rate actually increased in response to the executions.[56]

C. OTHER RECENT DETERRENCE STUDIES

Other economists claim that they have found significant deterrent effects from executions. For example, Paul Zimmerman initially argued that each execution deterred fourteen murders,[57] but later found that this deterrent effect was limited to electrocutions and did not extend to executions by other methods.[58] In February 2008, the Nebraska Supreme Court prohibited Nebraska from using the electric chair as its sole means of execution.[59] Today all states that allow electrocutions also offer the option of lethal injection.[60] Since only four of the 251 inmates executed between 2004 and 2008 chose to be electrocuted, Zimmerman's work suggests that whatever deterrent effect the death penalty may have had is now history.[61]

Roy Adler and Michael Summers published an astonishingly simple study on the subject,[62] which was publicized in the *Wall Street Journal*.[63] The authors examined U.S. homicides and executions from 1979 to 2004, and observed that the former decreased while the latter increased.[64] Their conclusion—that each execution prevented some seventy-four murders in the following year—was premised solely on the basis of that observation.[65] The authors did not use additional control variables, or consider factors such as patterns of drug use, possession of handguns, alternative punishments, or arrest rates for homicides.[66] No attempt was made to see if

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[56] *Id.* at 241-42 (stating that for example, "the single execution that Oregon conducted induced approximately 175 murders").

[57] Paul R. Zimmerman, *State Executions, Deterrence, and the Incidence of Murder*, 7 J. APPLIED ECON. 163, 190 (2004).

[58] Paul R. Zimmerman, *Estimates of the Deterrent Effect of Alternative Execution Methods in the United States: 1978-2000*, 65 AM. J. ECON. & SOC. 909, 910 (2006).

[59] State v. Mata, 745 N.W.2d 229, 279-80 (Neb. 2008).

[60] Death Penalty Info. Ctr., *supra* note 32.

[61] *Id.*

[62] Adler & Summers, *supra* note 10; *see also* Vic Lee, *Can Executions Decrease Murder Rates?*, ABC7NEWS.COM, Feb. 13, 2008, http://abclocal.go.com/kgo/story?section=news/local&id=5954192.

[63] *The Wall Street Journal* has a circulation of over two million readers. Press Release, News Corp., *The Wall Street Journal* Announces Circulation Growth for the Third Consecutive Reporting Period (Apr. 28, 2008), http://www.newscorp.com/news/news_377.html.

[64] Adler & Summers, *supra* note 10.

[65] *Id.*

[66] *See id.*

more murders are prevented in states that execute prisoners, or in states that execute the most, compared to states where the death penalty is not used.[67]

The apparent lack of consensus among the studies discussed above complicates an important social policy issue, namely how to reduce criminal violence. However, Michael Radelet's and Ronald Akers's 1996 survey of leading criminologists reveals that there is a consensus among scholars that the death penalty has little, if any, impact on criminal violence. In 1996, Radelet and Akers obtained completed questionnaires from sixty-seven of seventy-one former presidents of the three leading professional criminology associations in the United States: American Society of Criminology, Academy of Criminal Justice Sciences, and the Law and Society Association. They concluded that "there is a wide consensus among America's top criminologists that scholarly research has demonstrated that the death penalty does, and can do, little to reduce rates of criminal violence."[68]

This Article was designed to update the results obtained by Radelet and Akers in 1996. We now turn our attention to the methodology employed to accomplish that task.

III. METHODOLOGY

To shed light on this dispute, we drew up a list in mid-2008 of every living person who (1) was a Fellow in the American Society of Criminology (ASC),[69] (2) had won the ASC's Sutherland Award, the highest award given by that organization for contributions to criminological theory,[70] or (3) was a president of the ASC between 1997 and the present. The American Society of Criminology was founded in 1941 and is the

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[67] *See, e.g.*, Ronald J. Allen, Letter to the Editor, WALL ST. J., Nov. 8, 2007, at A21; Cassandra Stubbs, Letter to the Editor, WALL ST. J., Nov. 8, 2007, at A21.

[68] Radelet & Akers, *supra* note 4, at 10.

[69] According to the ASC Executive Board:

> The honorary title 'Fellow' recognizes persons who have made a scholarly contribution to the intellectual life of the discipline, whether in the form of a singular, major piece of scholarship or cumulative scholarly contributions. Longevity alone is not sufficient. In addition, a Fellow must have made a significant contribution to the field through the career development of other criminologists and/or through organizational activities within the ASC.

Am. Soc'y of Criminology, ASC Fellows, http://www.asc41.com/felsnom.html (last visited Mar. 15, 2009).

[70] The Edwin H. Sutherland Award (established in 1960) recognizes outstanding contributions to theory or research in criminology on the etiology of criminal and deviant behavior, the criminal justice system, corrections, law, or justice. The distinguished contribution may be based on a single outstanding book or work, on a series of theoretical or research contributions, or on the accumulated contributions by a senior scholar.

Am. Soc'y of Criminology, Edwin H. Sutherland Award, http://www.asc41.com/saward.html (last visited Mar. 15, 2009).

world's largest organization of academic criminologists, boasting a membership in 2008 of 3,500 criminologists from fifty countries.[71] ASC presidents who served prior to 1997 were not included in this survey because they were already surveyed by Radelet and Akers in 1996, and we did not want the opinions of this group to unfairly weight the 2008 results. Using this methodology, we identified ninety-four distinguished scholars as our pool of experts.

We sent questionnaires[72] to this group in July 2008, after approval from the University of Colorado's Human Subjects' Committee. With each questionnaire we enclosed a return envelope marked with a number for each respondent. Upon receipt of each completed questionnaire, a staff member in the Sociology Department recorded the respondent's information, removed any identifying information, and gave us the anonymous questionnaire. We sent two follow-up questionnaires in this manner to non-respondents. Within three months we received a total of seventy-nine questionnaires, resulting in a response rate of 84%. Three of the seventy-nine questionnaires we received were partially completed, with answers to only one or two questions, and included extensive reprimands for what the respondents thought were poorly worded questions. We included these incomplete questionnaires in our data file and coded the blank answers as *missing*.

Several of the fifteen non-respondents are now retired from their professional careers, and some are ill. However, given our high response rate of 84%, we believe that our results would not have been different even if the response rate had been higher—a few more returned questionnaires are too few to change the results significantly.

We instructed respondents to refrain from answering the questions on the basis of their personal opinions about the wisdom of the death penalty and asked them instead to limit their answers to their understanding of the empirical research.[73] The questionnaire included a dozen questions that were used in the 1996 survey, including two with minor word variations.[74]

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[71] *See* Am. Soc'y of Criminology, ASC Membership Directory, http://www.asc41.com/director/frame.htm (last visited Mar. 15, 2009). "The American Society of Criminology is an international organization whose members pursue scholarly, scientific, and professional knowledge concerning the measurement, etiology, consequences, prevention, control, and treatment of crime and delinquency." Am. Soc'y of Criminology, About ASC, http://www.asc41.com/about.htm (last visited Mar. 15, 2009).

[72] *See infra* App. A.

[73] The questionnaire cover letter stated:

> I am asking only your considered opinion as informed by your general understanding of the conclusions that can be reached from that research. I am NOT asking for your personal opinion in support of or opposition to capital punishment, which obviously will be influenced by your personal philosophical, ethical, or religious orientation. Instead, I am only asking for your

IV. RESULTS

Appendix I presents the 2008 survey results and a comparison with the 1996 Radelet and Akers survey results.[75] Differences between the 1996 responses and the 2008 responses are not statistically significant, supporting the conclusion that the opinions of the experts in 2008 were remarkably similar to those held by the different group of experts in 1996. We used a Chi-square test, which is frequently used by social scientists to measure statistical association. If the 1996 response patterns are similar to those found in 2008, then a non-significant Chi-square statistic informs us that any differences are due to random variation and are substantively unimportant. However, if there is a low probability that the patterns in the two studies are similar (the convention is $p \leq .05$), then the differences are substantively important.[76]

The first question included in the 2008 questionnaire is also regularly asked in Gallup Polls. Here, 88.2% of the polled criminologists do not believe that the death penalty is a deterrent, up slightly from 83.6% in 1996. With the *not sure* responses eliminated, the proportion of responses that reject the deterrence argument increased from 87.5% in 1996 to 94.3% in 2008. This difference is not statistically significant, which indicates that there has been virtually no change in the experts' opinions over the twelve years between the two surveys. In contrast, when the question was last posed by Gallup in 2006, 64% of the general public expressed the belief that the death penalty did not lower homicide rates.[77]

Question 2 asks the experts if they believe that abolishing the death penalty in a given state would affect that state's homicide rate. Again, the data is similar between the two samples: 86.5% of the experts in 1996 responded that they are "sure" or "think" it is true that abolition would significantly affect the murder rate, compared to 87% in 2008.

Question 3 asked respondents if they agreed that the empirical research shows that death-penalty states have lower homicide rates than neighboring

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responses about an empirical issue—deterrence of homicide—and a couple of questions about the politics of crime control.

Letter from Michael L. Radelet, Professor and Chair, Dep't of Sociology, Univ. of Colo.-Boulder, to study participants (2008) (on file with author).

[74] *See infra* App. A, Questions 7, 10. For information on how Radelet and Akers selected the questions, see Radelet & Akers, *supra* note 4, at 7-10.

[75] Although the paper by Radelet and Akers was published in 1996, they mailed the questionnaires to respondents in August 1995, thirteen years before we mailed our questionnaires.

[76] *See, e.g.*, ALAN AGRESTI & CHRISTI FRANKLIN, STATISTICS: THE ART AND SCIENCE OF LEARNING FROM DATA 550-61 (2007).

[77] Gallup, Inc., *supra* note 15.

non-death-penalty states. Of the 2008 respondents, 9.4% answered affirmatively, compared to 6.0% in 1996. Conversely, 74.7% of the 2008 experts believe the research shows that this assertion is false, down a bit from the 79.1% in 1996. In point of fact, death penalty states have consistently higher homicide rates than non-death-penalty states. In 2007, for example, the homicide rate in states with active death penalty statutes was 42% higher than that of non-death-penalty states.[78]

Question 4 asks if politicians support the death penalty as a symbolic way to show that they are tough on crime. Overall, there was strong agreement with this statement in the 1996 and 2008 samples. However, in 1996, 38.8% of the respondents answered that this was a "totally accurate" statement, compared to 23.4% in 2008. Although this difference is not statistically significant, it supports the observation that the death penalty is not as important in political debates today as it was in the 1990s. In 1992, for example, Arkansas Governor and Presidential candidate Bill Clinton left New Hampshire shortly before its primary and returned to Arkansas to preside over the execution of a brain-damaged prisoner named Ricky Rector.[79] In the 2008 elections, the death penalty was a major issue in few (if any) state or federal campaigns.

The responses to Question 5 also reflect the decreasing political importance of the death penalty. Question 5 asks the respondents' opinions about whether debates about the death penalty distract politicians from focusing on "real" solutions to crime. In 1996, 86.6% of the polled criminologists responded that this statement was accurate, a figure that decreased to 75.4% in 2008. However, in 1996, only one expert was "not sure" about this statement, a figure that grew to ten respondents in 2008. When the *not sure* responses are eliminated from each sample, the affirmative response rate—"totally" or "largely accurate" responses—changes to 87.9% in 1996 and 86.6% in 2008.

Question 6 again shows low support for the deterrence hypothesis. Here only 9.2% of the respondents (n=7) answered that the statement "[t]he death penalty significantly reduces the number of homicides" was accurate. While this figure is slightly higher than the proportion of respondents that supported the deterrence hypothesis in Question 1, three experts who responded *largely accurate* to Question 6 also responded negatively to Question 1, indicating they did not support the deterrence hypothesis. The

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[78] For comparisons of homicide rates between death-penalty and non-death-penalty states between 1990 and 1997, see Death Penalty Info. Ctr., Gap Between the Murder Rate of Death Penalty States and Non-Death Penalty States Remains Large, http://www.deathpenaltyinfo.org/gap-between-murder-rate-death-penalty-states-and-non-death-penalty-states-remains-large (last visited Mar. 15, 2009).

[79] Marshall Frady, *Death in Arkansas*, NEW YORKER, Feb. 23, 1993, at 105.

responses of these three experts are inconsistent. Overall, it is clear that however measured, fewer than 10% of the polled experts believe the deterrence effect of the death penalty is stronger than that of long-term imprisonment.

Responses to Questions 7-9 also indicate widespread rejection of the deterrence argument, with minor and insignificant differences between the samples. In 1996, only 4.6% of the respondents agreed that the threat or use of the death penalty was a stronger deterrent than long-term or life imprisonment, a figure that increased to 9.5% in 2008.[80] Responses to Question 8 show that in 1996, only 4.6% of the experts thought the empirical research gave strong or moderate support to the deterrence argument; this increased to 5.3% in 2008.[81] Responses to Question 9 show that 18.7% of those in the 1996 sample thought that increasing the frequency of executions would increase the overall deterrent effect, but only 8.3% thought so in 2008.

Question 10 addresses celerity, which is the time between the commission of the offense and the administration of the punishment. In 1996, 26.9% of the respondents thought that shortening the time between sentence and execution would add to the death penalty's deterrent effect. In 2008, only 12.4% thought so. This difference is not statistically significant.

Question 11 measures support for the brutalization hypothesis, which posits that executions actually increase homicide rates, rather than decrease them. In 1996, 29.7% of the experts believed this was true, but in 2008 only 18.8% agreed with the hypothesis. This difference is not statistically significant.

Finally, Question 12 was developed as a summary question by the present researchers to ascertain the overall belief in the deterrence hypothesis. Here only 2.6% of the 2008 respondents agreed that executing people deters others from committing murder, while 89.6% of the experts disagreed. The message is clear: few of America's top criminologists believe the threat or use of the death penalty can reduce homicide rates any more than long-term imprisonment.

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[80] *See infra* App. A, Question 7.

[81] The difference in response patterns on this question between 1996 and 2008 is statistically significant, but not substantively significant. In 1996, 95.5% of the responses to Question 8 said there was "weak" or "no" support for the deterrence hypothesis. In 2008, this figure decreased slightly to 94.7%. However, in 2008, more respondents said there was "weak support" (56% versus 44.6%), and fewer said there was "strong support" (38.7% versus 50.8%). Undoubtedly, this shift reflects an awareness of the new econometric studies on deterrence, which many respondents felt only provide weak support for the deterrence argument. *See infra* App. A, Question 8.

V. CONCLUSION

As noted above, Naci Mocan has not responded to Berk's and Fagans's critique of his highly-publicized study, which claimed that the death penalty had a deterrent effect. Instead, in 2007 Professor Mocan told writers for both the Associated Press[82] and the *New York Times*[83] that he still believed the death penalty has a deterrent effect. When asked by Associated Press reporter Robert Tanner to comment on the empirical support for the deterrence position, Professor Mocan replied that "[s]cience does really draw a conclusion. It did. There is no question about it . . . . The conclusion is there is a deterrent effect."[84]

The data reported in this Article do not support Mocan's position. To the contrary, the data show that the scientific community, in particular social scientists, would likely take a position opposite that of Professor Mocan. Our survey indicates that the vast majority of the world's top criminologists believe that the empirical research has revealed the deterrence hypothesis for a myth. There isn't a shred of evidence that supports the *New York Times*'s assertion that there is "an intense new debate about one of the central justifications for capital punishment," namely deterrence.[85] Recent econometric studies, which posit that the death penalty has a marginal deterrent effect beyond that of long-term imprisonment, are so limited or flawed that they have failed to undermine consensus.

In short, the consensus among criminologists is that the death penalty does not add any significant deterrent effect above that of long-term imprisonment.

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[82] Tanner, *supra* note 45.

[83] Liptak, *supra* note 11.

[84] Tanner, *supra* note 45.

[85] Liptak, *supra* note 11.

APPENDIX A

RESPONSES TO QUESTIONS

1. Do you feel that the death penalty acts as a deterrent to the commitment to murder—that it lowers the murder rate, or not?

	2008 Experts (n=76) n (%)	1996 Experts (n=67) n (%)
Yes:	4 (5.3)	8 (11.9)
No:	67 (88.2)	56 (83.6)
No Opinion:	5 (6.6)	3 (4.5)

$\chi^2 = 2.26$, df=2, p=.323.

2. Abolishing the death penalty (in a particular state) would not have any significant effects on the murder rate (in that state).

	2008 Experts (n=77) n (%)	1996 Experts (n=67) n (%)
I'm sure it is true	26 (33.8)	22 (32.8)
I think it's true	41 (53.2)	36 (53.7)
I have no idea whether it is true or false	2 (2.6)	7 (10.4)
I think it's false	4 (5.2)	2 (3.0)
I'm sure it's false	4 (5.2)	0

$\chi^2 = 7.44$, df=4, p=.114.

3. Over the years, states which have had the death penalty have had lower murder rates than neighboring states which did not have a death penalty.

	2008 Experts (n=75) n (%)	1996 Experts (n=67) n (%)
I'm sure it is true	2 (2.7)	0
I think it's true	5 (6.7)	4 (6.0)
I have no idea whether it is true or false	12 (16.0)	10 (14.9)
I think it's false	30 (40.0)	27 (40.3)
I'm sure it's false	26 (34.7)	26 (38.8)

$\chi^2 = 2.01$, df=4, p=.735.

4. Politicians support the death penalty as a symbolic way to show they are tough on crime.

	2008 Experts (n=77) n (%)	1996 Experts (n=67) n (%)
Totally accurate	18 (23.4)	26 (38.8)
Largely accurate	52 (67.5)	41 (61.2)
Largely inaccurate	4 (5.2)	0
Totally inaccurate	1 (1.3)	0
Not sure	2 (2.6)	0

$\chi^2 = 9.11$, df=4, p=.059.

5. Debates about the death penalty distract Congress and state legislatures from focusing on real solutions to crime problems.

	2008 Experts (n=77) n (%)	1996 Experts (n=67) n (%)
Totally accurate	21 (27.3)	33 (49.3)
Largely accurate	37 (48.1)	25 (37.3)
Largely inaccurate	8 (10.4)	8 (11.9)
Totally inaccurate	1 (1.3)	0
Not sure	10 (13.0)	1 (1.5)

$\chi^2 = 12.7$, df=4, p=.013.

If those who are "not sure" are removed, $\chi^2 = 5.98$, df=3, p=.112.

6. The death penalty significantly reduces the number of homicides.

	2008 Experts (n=76) n (%)	1996 Experts (n=67) n (%)
Totally accurate	0	0
Largely accurate	7 (9.2)	0
Largely inaccurate	25 (32.9)	28 (41.8)
Totally inaccurate	43 (56.6)	35 (52.2)
Not sure	1 (1.3)	4 (6.0)

χ^2 cannot be computed because too many cells have a value of zero.

7. Overall, over the last twenty years,[86] the threat or use of the death penalty in the United States has been a stronger deterrent to homicide than the threat or use of long (or life) prison sentences.

	2008 Experts (n=74) n (%)	1996 Experts (n=65) n (%)
Strongly agree	2 (2.7)	0
Agree	5 (6.8)	3 (4.6)
Disagree	34 (45.9)	29 (44.6)
Strongly Disagree	33 (44.6)	33 (50.8)

$\chi^2 = 2.32$, df=3, p=.508.

8. Overall, how would you evaluate the empirical support for the deterrent effects of the death penalty?

	2008 Experts (n=75) n (%)	1996 Experts (n=65) n (%)
Strong support	1 (1.3)	0
Moderate support	3 (4.0)	3 (4.6)
Weak support	42 (56.0)	29 (44.6)
No support	29 (38.7)	33 (50.8)

$\chi^2 = 8.20$, df=3, p=.042.

9. If the frequency of executions were to increase significantly, more homicides would be deterred than if the current frequency of executions remained relatively stable.

	2008 Experts (n=72) n (%)	1996 Experts (n=64) n (%)
Strongly agree	0	2 (3.1)
Agree	6 (8.3)	10 (15.6)
Disagree	34 (47.2)	30 (46.9)
Strongly disagree	32 (44.4)	23 (35.9)

$\chi^2 = 4.38$, df=3, p=.224.

[86] This was changed to "in the last thirty years" in the 2008 questionnaire.

10. The average time on death row between sentence and execution is now between eight and ten years.[87] *If that period was reduced significantly, there is reason to expect that the death penalty would deter more homicides than it does toady.*

	2008 Experts (n=73) n (%)	1996 Experts (n=67) n (%)
Strongly agree	1 (1.4)	3 (4.5)
Agree	8 (11.0)	15 (22.4)
Disagree	39 (53.4)	30 (44.8)
Strongly disagree	25 (34.2)	19 (28.4)

$\chi^2 = 4.87$, df=3, p=.181.

11. Overall, the presence of the death penalty tends to increase *a state's murder rate rather than to* decrease *it.*

	2008 Experts (n=69) n (%)	1996 Experts (n=64) n (%)
Strongly agree	3 (4.3)	3 (4.7)
Agree	10 (14.5)	16 (25)
Disagree	44 (63.8)	35 (54.7)
Strongly disagree	12 (17.4)	10 (15.6)

$\chi^2 = 2.41$, df=3, p=.492.

12. Do you feel that executing people who commit murder deters others from committing murder, or do you think that such executions don't have much effect?

	2008 Experts (n=77) n (%)
Deters Others	2 (2.6)
Not Much Effect	69 (89.6)
Not Sure	6 (7.8)
Missing	n=2

[87] This was changed to "between ten and fifteen years" in the 2008 questionnaire.