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DESERT AND DETERRENCE: AN ASSESSMENT OF THE MORAL BASES OF THE CASE FOR CAPITAL PUNISHMENT

• Richard O. Lempert*

The controversy over the death penalty has generated arguments of two types. The first argument appeals to moral intuitions; the second concerns deterrence. Although both types of argument speak to the morality of systems of capital punishment, the first debate has been dominated by moral philosophers and the second by empirical social scientists. For convenience I shall at times refer to the approach of the moral philosophers as the moral case for (or against) capital punishment or as the argument from morality.

Those who make out a moral case for the death penalty argue in a variety of ways that those who kill others deserve to die.¹ Indeed, to some it is our willingness to execute the murderer which affirms the high value that all participants in the debate place on human life.² This is the essence of what is usually called the retributivist position. The moral argument against the death penalty starts with the principle that it is wrong intentionally to take human life. For those who regard this principle as an absolute, the fact that it is wrong to kill does not make it right to take the murderer's life. Opponents of the death penalty correctly point out that in an era when the "eye for an eye" approach to punishment has been abandoned for almost every crime, no self-evident principle demands that it be

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1. See, e.g., W. BERNIS, FOR CAPITAL PUNISHMENT (1979); E. VAN DEN HAAG, PUNISHING CRIMINALS (1975); Gerstein, *Capital Punishment — "Cruel and Unusual"?* A Retributivist Response, 85 ETHICS 75 (1974); van den Haag, *In Defense of the Death Penalty: A Legal-Political-Moral Analysis*, 14 CRIM. L. BULL. 51 (1978); Vellenga, *Christianity and the Death Penalty*, in THE DEATH PENALTY IN AMERICA 123 (H. Bedau ed. 1967); Weiler, *Why Do We Punish? The Case for Retributive Justice*, 12 U. BRIT. COLUM. L. REV. 295 (1978).

2. See, e.g., W. BERNIS, *supra* note 1; Weiler, *supra* note 1.

retained for homicide.³ They also make the more debatable argument that the state's action in taking a life degrades the values it allegedly asserts.

Both sides of the argument from morality are concerned with issues of justice.⁴ No principle of retribution allows the taking of an innocent life. Nor does the just desert theory allow personal characteristics such as sex, race, or national status to dominate indicia of moral culpability in determining punishment.⁵ Retributivists justify the death penalty despite substantial evidence that it has been inequitably applied by arguing that inequitable application is not inherent in the penalty, and that it is better that some receive their just

3. See, e.g., Gibbs, *Preventive Effects of Capital Punishment Other than Deterrence*, 14 CRIM. L. BULL. 34 (1978).

4. Compare Black, *Reflections on Opposing the Penalty of Death*, 10 ST. MARY'S L.J. 1 (1978), and C. BLACK, CAPITAL PUNISHMENT: THE INEVITABILITY OF CAPRICE AND MISTAKE (1974), with Gerstein, *supra* note 1.

5. To my knowledge no modern retributivist has argued that unalterable personal characteristics such as race and sex may be properly considered in assessing culpability for crime. However, we must recognize that when people are sentenced such factors may affect moral judgments. The reason that the vast majority of those executed for rape have been black men in Southern and border states accused of raping white women, see Wolfgang & Redel, *Rape, Racial Discrimination and the Death Penalty*, in CAPITAL PUNISHMENT IN THE UNITED STATES 99 (H. Bedau & C. Pierce eds. 1976), is probably that the dominant majority in the executing states regarded such interracial rape (but not its converse) as especially immoral. Similar racial bias exists in the punishment of homicide. Thirty years ago, Garfinkel collected data on homicide indictments in ten North Carolina counties for the years 1930 through 1940. Garfinkel, *Research Note on Inter- and Intra-Racial Homicides*, 27 SOC. FORCES 369 (1949). The data indicated that a black indicted for killing a white had a 29% chance of receiving a death sentence. A white indicted for killing a white had a 7% probability of being sentenced to death. A black indicted for killing a black had a 3% probability of receiving the death sentence, and whites indicted for killing blacks never received the ultimate punishment. These figures suggest two kinds of racial bias, harsher penalties are exacted when killers are black regardless of the victim's race and when victims are white regardless of the killer's race. There is also an interaction effect such that black killers of white victims are particularly likely to receive the death sentence.

Statutes passed after *Furman v. Georgia*, 408 U.S. 238 (1972), have not eliminated these racial biases in sentencing. Bowers and Pierce replicated Garfinkel's basic pattern of bias for post-*Furman* executions (through 1977) in Florida, Georgia, Texas, and Ohio, which collectively accounted for about 70% of the nation's death sentences in the five years after *Furman*. Bowers & Pierce, *Arbitrariness and Discrimination under Post-Furman Capital Statutes*, 26 CRIME & DELINQUENCY 563 (1980). In Florida, for example, blacks who killed whites were more than five times as likely to get the death sentence as whites who killed whites, and white people who killed whites were more than forty times as likely to get the death sentence as whites who killed blacks. Both patterns of bias persist, although to a lesser degree, when murders accompanied by other felony circumstances (and thus likely to be between strangers) are distinguished from other homicides.

Bowers and Pierce also present data that suggest that a considerable amount of caprice is part of the death sentencing process. In Florida and Georgia, for example, the probability of a death sentence is significantly related to the region in which the homicide is tried, *id.* at 616-25, and the likelihood that particular aggravating circumstances will be found appears to depend more on the aggravation necessary to justify a death sentence than on the facts of each case, *id.* at 625-29. For an estimation of the degree of arbitrariness in death sentencing under California's pre-*Furman* statute, see Baldus, Pulaski, Woodworth & Kyle, *Identifying Comparatively Excessive Sentences of Death: A Quantitative Approach*, 33 STAN. L. REV. 1 (1980).

deserts, however biased the sample executed, than that none do.⁶ For some opponents of capital punishment the inconsistency with which it is applied is enough to condemn it.⁷ These opponents need not confront the question of whether it is ultimately just to execute the murderer, for regardless of ultimate deserts, extreme penalties cannot be allowed so long as aspects of personal disadvantage play an important part in determining who from among an equally culpable lot will be subject to the extreme sanction.

The argument concerning deterrence is of a different kind. If executions deter, it means that killing some who have behaved heinously will prevent the untimely death of blameless others. Indeed, those who support capital punishment because of its deterrent effects expect that one execution will save several lives, thus avoiding the nice philosophical question of whether an innocent life is worth more than a guilty one. Many opponents of the death penalty implicitly concede that capital punishment is morally permissible if it saves more lives than it takes.⁸ The argument is over the empirical question of whether the death penalty actually deters and, if so, in what circumstances and to what extent.

There is no necessary connection between moral positions on the justice of capital punishment and empirical judgments as to whether executions deter, but, not surprisingly, moral opponents find comfort in evidence that executions do not deter while moral supporters are heartened by those studies that suggest they do. It is difficult for those whose essential case against the death penalty rests on the value of life to maintain their positions if an execution in fact trades one guilty life for several innocent ones.⁹ Even the argument from equality is clouded if the execution of each killer, however inequitably each is selected from among a larger number, prevents the death of several innocent people. Since the same features of social class which make one peculiarly eligible for capital punishment make one disproportionately likely to be a homicide victim, there may even be

6. van den Haag, *supra* note 1, 14 CRIM. L. BULL. at 53-56.

7. See, e.g., C. BLACK, *supra* note 4. This view also influenced several of the concurring Justices in *Furman v. Georgia*, 408 U.S. 238 (1972).

8. One wonders if the concession would be forthcoming if the opponents were not convinced that the evidence shows capital punishment does not deter.

9. For an intriguing argument that this trade-off does not justify capital punishment as a matter of human values because the life to be lost is known and the lives to be saved unknown, see McKee & Sesnowitz, *Welfare Economics Aspects of Capital Punishment*, 35 AM. J. ECON. & SOC. 40 (1976). See also Donnelly, *A Theory of Justice, Judicial Methodology, and the Constitutionality of Capital Punishment: Rawls, Dworkin, and a Theory of Criminal Responsibility*, 29 SYRACUSE L. REV. 1109, 1145-52 (1978).

a kind of rough justice within classes if executions deter.¹⁰

Although retributivists trace their heritage to Kant and before him to the Bible, utilitarianism is pervasive enough in modern thought that most retributivists would be troubled if a plausible case could not be made for deterrence. Death by execution is both brutal and final.¹¹ It is hard to make the case for such a penalty when the only end promoted is the unprovable intuition that it is just.¹² Nevertheless, modern retributivists have been less concerned than their opponents with the evidence bearing on deterrence. This may in part be because until recently there was virtually no empirical evidence that gave them comfort. Indeed, a desire to justify capital punishment on grounds other than deterrence has probably contributed to the revival of retributivist theories of punishment. The retributivist justification is possible — although nondeterrence be proven — because justice, however intuitive its grounding, is itself a valued end. Thus, the argument from justice does not necessarily take us beyond the question of whether an offender deserves execution. The opposing moral claim, from the value of life, pulls us almost irresistibly to the question of whether taking an offender's life will be compensated by the preservation of lives that would otherwise be lost to murder — the empirical question addressed by the research on deterrence.

10. This conclusion assumes a general deterrent effect not closely tied to the characteristics of those crimes that result in executions. When a lower-class offender is executed for killing an upper-class victim, members of the lower class may receive few benefits from deterrence if the message conveyed is not "it is wrong to kill," but is instead "it is wrong to kill above your class."

11. Descriptions of executions bring home the point. Camus' well-known *Reflections on the Guillotine*, in *RESISTANCE, REBELLION, AND DEATH* 173, 182-85 (J. O'Brien trans. 1961), captures both the horror and the brutality of the event. But even ordinary descriptions of ordinary executions convey a special sense of horror. West, for example, describing how he came to oppose capital punishment, writes:

In one hour on August 4, 1952, at the Fort Madison, Iowa, State Penitentiary, I learned that a chronic schizophrenic man can be found legally sane and thus qualify for hanging; that those who came to watch are likely to have a strange and an unhealthy glitter in their eyes; that a man hits the end of a rope with a terrible crack; that he doesn't just dangle but is likely to writhe for some time; and that the heart stops reluctantly, as the doctors must discover, listening with stethoscopes all the while. As I listened (for an interminable 13 minutes) to the dying heart of Edward J. Beckwith, there was time for me to ask myself a host of troublesome questions about what we had done that morning.

West, *Psychiatric Reflections on the Death Penalty*, in *CAPITAL PUNISHMENT IN THE UNITED STATES*, *supra* note 5, at 419, 420.

12. Indeed, one often encounters the idea that executions should be made as painless and as dignified as possible. Lehtinen, for example, suggests that the executed be administered a lethal dose of a sedative in a hospital and his organs made available for transplant. Lehtinen, *The Value of Life: An Argument for the Death Penalty*, 23 *CRIME & DELINQUENCY* 237, 246 (1977).

I. PROBLEMS WITH RETRIBUTIVISM

A. *Inferring Policy from Philosophy*

Despite my willingness to concede for the sake of argument that justice — by which I mean giving a person his just deserts — may be a value superior to life, I believe that the retributivist attempt to escape the deterrence question is inadequate, and that ultimately the moral decision on the death penalty must reflect an empirical assessment. The most powerful retributivist arguments for the death penalty fail as a moral justification for capital punishment because they do not address the crucial question. Retributivists have let their agenda be set by those who defend life as an ultimate value. Thus, they direct most of their attention to the question of whether murderers deserve to die. While an affirmative answer to this question is necessary to justify capital punishment, it is not sufficient. There remains the rather different question of whether the *state* should be allowed to execute murderers.

A state-run system of executions poses problems for retributivists which are not posed by the mere taking of guilty lives. We can perhaps best appreciate this at an intuitive level. It is easy to imagine a person who is not troubled by news that an escaping murderer has been shot and yet quite disturbed by the news that a murderer is about to be executed. In Chicago, for example, between the years 1934 and 1954 eight times as many criminals were killed by police or private individuals as were executed in the Cook County Jail.¹³ The executions, no doubt, caused far more controversy and grief than did the other killings, even though many of the latter must have involved crimes for which the death penalty could not have been given. In part this is because the scheduling of executions allows those who value even guilty lives to become involved in efforts to save them, but this cannot be the whole story. If lives were the only issue, more effort would be directed toward preventing police and shop owners from shooting fleeing felons than toward the abolition of capital punishment. Another reason why state executions excite feelings that are not excited when the sole issue is whether a slain murderer has received his just deserts is that our doubts about the justness of the desert we mete out increase when the state does the killing. We can explain the deadly reaction of a store owner or police officer to a perceived threat as a normal human response to pressure, but because the state has time for considered action, we hold it to special standards of rationality.

13. T. SELLIN, *THE DEATH PENALTY* 62 (1959).

Once we acknowledge that not everyone who kills another should die — and virtually all modern retributivists acknowledge this — doubts about the fairness of the process by which we select those we execute arise. I have already mentioned the difficulties some see in justifying executions when the poor or the black are over-selected for the ultimate punishment, but even less invidious inconsistencies must trouble the retributivist. For absent some self-evident principle separating murderers who deserve to die from those who do not, a *principled* basis for retributivism may only be determined inductively. If inconsistent sentencing prevents the derivation of a socially validated principle, the person who applauds the execution of the murderer is applauding what is literally unprincipled state action. While unprincipled state action may be more common than most of us would like, we usually try to avoid theories which, when applied, lead us to applaud it.

If there is solace for the retributivist, it is in his sense that the state's lack of principle leads it to spare life rather than to take it. People who deserve to die but are spared death can hardly prick one's conscience. While this view may satisfy some moralists who would otherwise have qualms about espousing an inevitably capricious system of capital punishment, it offers nothing to the skeptic. When one criminal is executed and another of apparently equal culpability spared, there is no self-evident reason why the sparing and not the execution is wrong. When a state cannot act consistently in such an important matter as determining who shall die, those who invoke moral philosophy to demand that the state be allowed to make that determination should be able to point to a consensually validated principle which assures us that the inconsistency is benign.¹⁴

Retributivism is also haunted by those executions of the innocent which inevitably occur if the death penalty is allowed. It is true that documented cases in which the wrong person is executed are quite rare,¹⁵ and likely to remain so. But, as a purely philosophical matter, this is of little help to the retributivist. Retributivism, on its own terms, allows life to be taken only when death is deserved; it does not tolerate killing as a means to some greater social good. Retribu-

14. Retributivists can escape the dilemma, and some do, by claiming that their purpose is limited to determining the characteristics of a just system of punishment in a just world. However, if the limitation is meant seriously, we know from the research of economists on the theory of the second best that a system which maximizes justice in an ideal world is not necessarily the most just system in an imperfect society.

15. See, e.g., Pollak, *The Errors of Justice*, in CAPITAL PUNISHMENT 207 (T. Sellin ed. 1967).

tivists are proud of their Kantian heritage, which demands that life be treated only as an end. Thus, however good a just punishment system and however much such a system demands the death penalty, the philosophy of retributivism apparently forbids the sacrifice of innocent lives as a condition for the maintenance of such a system. Ideally, of course, a system of capital punishment would not take innocent lives, but we know as a statistical matter that if a state executes often enough, some innocent lives will be lost. Although it may be a comfort not knowing what lives will be mistakenly taken, nothing about retributivism allows us to sacrifice the lives of unknown innocents in the interest of just vengeance.¹⁶

As I have noted, few modern retributivists believe that all killers deserve death. They respect the law's determination that capital punishment should be reserved for the most morally culpable: those who fully intended, and perhaps rejoiced in, the suffering and death they inflicted and who, in some meaningful sense, could have done otherwise. Moral culpability, thus conceived, is a subjective state. To truly determine who are the most evil and thus the most deserving of death one would have to search people's minds. Our inability to do so means that in deciding whether to inflict the death penalty we often attend more to the circumstances of the crime than to the circumstances of the criminal. The person who slays in a peculiar or brutal way is more likely to receive the death penalty than one who dispatches his victim with a single bullet, yet the former may have been insane under all but the narrowest legal test while the latter was cool and calculating.

Indeed, the former may have been insane even under any legal test. While the mistaken conviction of those who have not killed is certainly rare, the mistaken allocation of responsibility to those who

16. Absent the death penalty there would still be substantial retributivism and thus justice in the form of sentences to life imprisonment. A number of innocent people will necessarily receive such sentences since mistakes are an inevitable part of any punishment system. The marginal loss of retributively defined justice in the case of the guilty will be the difference between the retributivism inherent in the life sentence and that inherent in an execution, but the marginal gain in justice accorded the innocent will be greater. A number of the innocent will prove their blamelessness after conviction, be released early from prison, and in all probability be compensated to some extent for the time they have served. Note that the presence of the death penalty may also contribute to the unjustified infliction of less than death sentences on the innocent. A guilty plea by an innocent accused may be more likely in a death penalty jurisdiction than in a jurisdiction where one does not risk death by asserting his innocence, and a jury qualified to impose the death penalty may be more likely mistakenly to convict of a less than capital offense than one which has not been so qualified. Haney, *Juries and the Death Penalty: Readdressing the Witherspoon Question*, 26 CRIME & DELINQUENCY 512 (1980); Jurow, *New Data on the Effect of a "Death Qualified" Jury on the Guilt Determination Process*, 84 HARV. L. REV. 567 (1971). For an extended discussion of the relevance of the fact that we do not know who is being executed wrongfully, see the appendix to this Article.

have killed may be uncomfortably common. To the retributivist one mistake is almost as bad as another, for in most retributivist schemes the unpremeditated murderer or the insane killer no more deserves to die than the innocent victim of a misidentification.¹⁷ In arguing from a retributivist philosophy to an actual system of state executions, retributivists are again advocating a system that will work substantial injustice as measured by the standards of the philosophical system they espouse.

The time lag between the time of the crime and the time of execution also poses problems for retributivism. Executions are justified only when the offender deserves to die. Assuming that all those sentenced to death deserved to die at the time they committed the crimes for which they were sentenced, it does not follow that they deserve death at the time it arrives. People so change with their experiences that one may sensibly conceive of individuals as different people deserving different fates at different points in time.¹⁸ Being on death row may be an experience that is especially likely to promote such a change in moral identity.¹⁹

In short, there is a fundamental irony to the usual retributivist position. Basic principles of moral justice that are believed to justify or even demand the death of those who maliciously kill others are necessarily offended by the attempt to impose a system of state executions in an imperfect world. The emphasis that retributivists place on human beings as ends and not as means, the high value they place on innocent human life, and their insistence that retributivism (unlike revenge) respects the bounds of law combine to form a philosophy from which one cannot derive a policy that trades the wrongful execution of a few for the proper execution of many.²⁰ Capital punishment implements such a policy. Conversely, any policy derived from a philosophy that is rooted in our intuitions regarding justice will be suspect if the system it prescribes distributes

17. Obviously one could construct a retributivist scheme in which all but accidental death was regarded as sufficiently heinous to merit capital punishment. Most retributivists have not done so, believing that the death sentence should be reserved for killings that the law classifies as first degree murder or for a particularly offensive subset of such killings.

18. A similar point has been made by Donald Regan in an article seeking justifications for paternalism. Regan, *Justifications for Paternalism*, in *THE LIMITS OF LAW* 189 (NOMOS XV, J. Pennock & J. Chapman eds. 1974).

19. For an example, see Bailey, *Rehabilitation on Death Row*, in *THE DEATH PENALTY IN AMERICA*, *supra* note 1.

20. Judging by the reactions of those who have read this Article in draft, this is the most controversial statement in this section of the paper. For those who do not accept my conclusion or are otherwise interested in the philosophic questions it raises, I offer a detailed analysis of this question. For those who agree with me or are not interested in pursuing the matter in detail, I offer it in an appendix.

rewards or punishments in an invidious or inconsistent fashion. Capital punishment is such a system.

B. *Implications of The Wish for Revenge*

The preceding discussion focuses on the logic of deriving a system of capital punishment from the premises of retributivism. As such, it speaks to the scholarly debate but does not address the more primitive appeal of retributivism. When one person wantonly kills another we are — if our senses have not been jaded by murder after murder — outraged. Retribution in the form of killing the offender seems like an honorable thing to do.

Why do we feel there is honor in repaying death with death? I believe the reasons are largely cultural. Once we understand them we will see how it is possible — injustices aside — to be attracted by retributivism while simultaneously opposing capital punishment.

Both our history and fiction are replete with characters and communities that are thought to have acted admirably in securing the death of grievous offenders. But it is not the fact of vengeful killing that we admire. Rather, it is the process by which retribution is achieved. We honor individuals not because they redress some cosmic balance sheet, but because they risk their lives for an idea of justice. The Arthurian epic nicely highlights the way in which the degree of honor depends on the element of personal risk. The legend is also interesting for its message that the honor sought by the avenging champion is secondary to that which may be found in search of the holy.

In the case of communities the infliction of death has, historically, a different meaning. The pursuit and execution of criminals were cooperative endeavors that brought communities together to reaffirm their central values.²¹ It is not the fact that a death was repaid with a death which is salutary; rather, it is the process necessary to bring this about. Just as the linkage of a positive reinforcer with a neutral stimulus will give the stimulus a positive quality, so do the efforts associated with past accounts of retribution give retributivism its lingering good name.²² But once the state assumes the burden of executing, the character of the retributive process is fundamentally

21. Obviously, this is not always the case, and we do not find communal retribution particularly admirable when it is not. See K. ERICKSON, *WAYWARD PURITANS* (1966).

22. For a long while many people thought that retributivism's name was all bad. However, the response to the efforts of the modern retributivists make it clear that, as a society, even the intellectuals among us acknowledge a positive side to retributivism. Cf. *Gregg v. Georgia*, 428 U.S. 153, 183-84 (1976) (noting various writers' acceptance of retributivism).

changed. There is no honor in watching the state execute one who in the past would have been a just target of the watcher's vengeance, nor does honor attach to the person who sets a noose or straps a convict into a chair. The meaning of executions has also changed considerably for communities. Specialized law enforcement means that citizens no longer have to come together to secure retribution, and the execution itself has become a source of passionate controversy rather than the occasion for a reassertion of communal solidarity.

In his book *For Capital Punishment*, Walter Berns uses the example of Shakespeare's Macbeth to make a strong intuitive case that some people's crimes are such that they must die.²³ One may agree with Berns that there is justice, both poetic and otherwise, in Macbeth's paying with his life for his crimes. But Berns's desired conclusion, that a system of state executions is appropriate and satisfying, does not follow.

Consider an alternative ending to Shakespeare's play. Macduff, instead of taking the field against Macbeth, calls the police to report Macbeth's murders. Macbeth is arrested and tried. He rejects a plea bargain that would have spared his life, and the case proceeds to trial. During the course of the lengthy trial the mass of people who hated Macbeth for his action begin to understand the character that led him to so act. He is no longer just the killer of Duncan and others, but is again, in almost impossible juxtaposition, one of Scotland's noblest Lords, himself deserving to be king. The people learn of Macbeth's instinctive revulsion at the idea of turning on his guest and king, they hear of Lady Macbeth's constant prodding, and they realize that Macbeth's will was inexplicably overborne. Finally, they sense that Macbeth's remorse is genuine and that he fully accepts the values his actions threatened. Nevertheless, the jury convicts and the judge, who is up for reelection that year, sentences Macbeth to die. A Gallup poll indicates that 44% of the people surveyed believe the sentence is just, 39% believe Macbeth should be spared, and 17% have no opinion. Immediately a committee to save Macbeth is formed. The next two years are taken up with judicial appeals — often on technical matters that have no relation to the core moral issues — and with pleas for executive clemency. From time to time a story appears in the paper emphasizing that whatever Macbeth was, he is today a decent man. Eventually the last appeal is dismissed and the king, after dropping hints that he might spare Macbeth, de-

23. W. BERNS, *supra* note 1, at 167.

cides it would be politically inexpedient to do so. On a cold November morning, with fifty members of the Spare Macbeth Committee marching outside the prison walls in protest, a warden, a minister, a doctor, an executioner, and two reporters watch Macbeth dangle on the end of a rope for twenty-five minutes until he chokes to death. The reporters note in the evening papers that "the drop was not handled well," but they do not mention the urination and defecation that took place while Macbeth was dangling. Television news uses the occasion to review the story of the assassination and to interview tearful members of Macbeth's family who, in their grief, accuse the state of murder.²⁴

Our satisfaction with Macduff's slaying of Macbeth, which Berns plays on so effectively, reflects not the fact of retribution but the way it was accomplished. Had an impersonal, divisive, state-controlled execution like that described above been the only way of dispatching Macbeth, the play, no doubt, would not have been written. Yet in contemporary society, with the importance we attach to personal freedom, trial justice, and the safeguarding of the innocent, this is the only way that the state may act retributively. There is nothing noble about it. As with the basic philosophical argument, the existence, and to that extent the self-evident validity, of the retributivist intuition that certain killers ought to be repaid with death tells us only that there is some good in killing evildoers. However, if we understand the intuition's cultural roots, we see that it does not follow that there ought to be a state system of capital punishment. The retributivist instinctively applauds Macduff because he bravely killed a man who deserved to die.²⁵ State executions not only destroy our consensus as to what fate is deserved, but they also eliminate the possibility of honor. Our instinct for revenge — and that is what the retributivist intuition is at base — was shaped by and is meant for a different world.

II. THE DETERRENCE ARGUMENT

The argument from deterrence does not share the deficiencies of the retributivist position. Its central premise — that executing murderers will save more lives than are taken — provides a reasonable

24. An alternative scenario would have Macbeth denying his complicity in the crime and blaming it all on the guards. While there might be enough evidence to convict Macbeth, we could never know as much as Shakespeare tells us. To this day people would be writing books protesting Macbeth's innocence. Many might believe them, and no one could know for sure that they were wrong.

25. The criminal law does not, however, applaud such action. Macduff would today be guilty of premeditated murder, and in some jurisdictions could be sentenced to death.

moral basis for a system of state executions.²⁶ The inevitable biased, mistaken, or inconsistent applications of the death penalty that make retributivism a philosophy fit only for an ideal world pose no special problems for the argument from deterrence. Such mistakes, although regrettable, do not contradict the basic premises of the argument. So long as the system of capital punishment saves more lives than are lost there is virtue in maintaining the system.

Indeed, the argument from deterrence can justify the execution of the innocent, for even a mistaken execution might prevent more than one murder.²⁷ This possibility has been taken by some as a ground for denying deterrence any place in the moral debate on capital punishment. But to so reject deterrence misses the crucial point, which is that deterrence as a moral justification for capital punishment is a necessary but not sufficient condition. The virtue of the net saving of human life that deterrence promises may be outweighed by the injustice of inconsistent or error-prone systems of capital punishment.²⁸

If the moral case for capital punishment turns for many people on its deterrent effects, it is because for those people the injustices inherent in a system of capital punishment are tolerable if state executions generate a net saving of human life.²⁹ Whether capital punishment saves lives by preventing homicide is an empirical question. Thus the moral argument from deterrence turns on an assessment of the social effects of capital punishment in a way that the moral argument from retributivism does not. Because the moral argument from deterrence turns on an empirical question, we shall turn shortly to an evaluation of the empirical evidence. Before we do, however, two matters should be clarified. The first involves a matter of definition and the second a question of perspective.

26. One can combine the deterrence and desert arguments, and might have to if several murderers had to be executed to deter one homicide. As presented, it is usually assumed that one execution will deter several homicides, and it is the argument in this form that will be examined most closely.

27. It is not necessarily the case that an execution is justified within the premises of deterrence theory whenever more than one murder is thereby deterred. It may be that we should value the known life of the condemned higher than the unknown lives which will be preserved at some future time. See McKee & Sesnowitz, *supra* note 9.

28. See, e.g., Schedler, *Capital Punishment and Its Deterrent Effect*, 4 SOC. THEORY & PRAC. 47-56 (1976); Lyons, *Deterrence Theory and Punishment of the Innocent*, 84 ETHICS 346 (1974); Margolis, *Capital Punishment*, 2 J. BEHAVIORAL ECON. 269 (1977); Wertheimer, *Deterrence and Retribution*, 86 ETHICS 181 (1976).

29. See, e.g., Goldberg, *On Capital Punishment*, 85 ETHICS 67 (1974); van den Haag, *supra* note 1, 14 CRIM. L. BULL. at 51; van den Haag, *On Deterrence and the Death Penalty*, 78 ETHICS 280 (1968).

A. *Preventive Effects*

Up to this point I have referred to the process by which capital punishment saves lives as "deterrence." But deterrence, which exists when one refrains from criminal action because he fears punishment, is only one of many ways that punishment can inhibit crime.³⁰ Gibbs, for example, points to seven ways other than deterrence in which punishment can prevent crime. He believes that two of these, incapacitation (the fact that those executed cannot slay again) and normative validation (the process by which punishment impresses the upright and the undecided with the moral validity of the norm proscribing homicide), might explain any significant tendency for regimes of capital punishment to lower homicide rates.³¹

Gibbs's suggestion that incapacitation might explain apparent deterrent effects of the death penalty is probably mistaken, for a substantial degree of incapacitation is built into the lengthy prison sentences that murderers receive in the absence of a death penalty. Research suggests that murderers rarely kill in prison and are unlikely to engage in violent crime if they are paroled. Giardini and Farrow, looking at 197 capital offenders in twenty-two states who had been on parole for periods ranging from one to thirty-eight years, report that only eleven violated parole by committing new offenses, and that none committed a homicide.³² In an editorial postscript to Giardini and Farrow, Sellin notes that as of 1956 only one of 342 male prisoners paroled in California from first-degree murder convictions between 1945 and 1954 had been returned to prison after being convicted of murder. He also reports that none of sixty-three first-degree murderers paroled in New York between the years 1930 and 1961 and none of 273 first-degree murderers paroled in Ohio between 1945 and 1965 was returned to prison for committing a homicide.³³ Jayewardene, extrapolating from Finnish data, estimates that had Canada spared the seventy-two murderers it executed between 1950 and 1964, and instead released them *immediately* upon conviction, there would have been two additional homicides during that fifteen-year period. If Canada had executed every one of its 262 capital murderers during those years, six lives is the most that might

30. See Andenaes, *The General Preventive Effects of Punishment*, 114 U. PA. L. REV. 949 (1966).

31. See Gibbs, *supra* note 3.

32. Giardini & Farrow, *The Paroling of Capital Offenders*, in CAPITAL PUNISHMENT, *supra* note 15, at 169.

33. *Id.* at 185-86.

have been saved.³⁴

The preventive effects of normative validation may be more substantial. Supporters of capital punishment are fond of quoting Sir James Fitzjames Stephen, who wrote:

Some men probably abstain from murder because they fear that if they committed murder they would be hanged. Hundreds of thousands abstain from it because they regard it with horror. One great reason why they regard it with horror is that murderers are hanged.³⁵

The argument is reasonable. It may be that the main benefit of capital punishment is that it teaches people that it is wrong to kill. But the opposite position is also reasonable. It may be that capital punishment teaches people that life is not sacred and that killing is not always a moral wrong.³⁶

When I speak of the deterrent effect of capital punishment in my review of the empirical literature, I will generally be using the term as a shorthand reference for all the preventive effects associated with a system of capital punishment. Data relating to capital punishment have never been analyzed with an eye to separating deterrent from normative validation effects, although the distinction might have important policy implications. If capital punishment reduces homicides predominantly through deterrence, frequent executions might be justified. If the reduction occurs primarily through normative validation, an occasional execution every few years might prevent as many deaths as a large number.³⁷

34. C. JAYEWARDENE, *THE PENALTY OF DEATH* (1977). There are problems with Jayewardene's figures apart from the problems inherent in any extrapolation. The prediction that substituting parole for 72 executions would mean only two deaths is based on homicide rates where parole follows lengthy imprisonment. Paroling instead of executing might lead to more homicides not only because of decreased incapacitation but also because of decreased deterrence as well as the release of people at more violence-prone ages. On the other hand, it is important to recognize that the case for preventing homicide by executing all first-degree murderers might, consideration of desert aside, apply to all violent criminals. It is plausible that the murder rate among those who have committed other violent crimes is at least as high, after controlling for age at release, as the rate for former murderers. Finally, if the 262 murderers who were not executed were also not paroled, it is unlikely that they would commit murders at the rate of paroled offenders, and so the decision not to execute would not cost as much as six lives.

35. J. STEPHEN, *A HISTORY OF THE CRIMINAL LAW IN ENGLAND* (1883), *quoted in* E. VAN DEN HAAG, *supra* note 1, *PUNISHING CRIMINALS* at 68-69.

36. *Cf.* Sykes & Matza, *Techniques of Neutralization: A Theory of Delinquency*, 22 AM. SOC. REV. 664 (1957) (juvenile delinquents learn to neutralize portions of dominant norms and values, thus making their actions not seem morally wrong to them). See also the discussion of Bowers and Pierce's research in text at notes 121-29 *infra*.

37. If this is true, we should be able empirically to separate effects of normative validation from those of deterrence by determining whether single executions are more important than execution rates in explaining homicide. However, it is also possible that people's subjective fear of being executed for murder rises sharply with the first execution in a jurisdiction within a given time period and rather less sharply thereafter.

The potential impact of normative validation also confounds the search for deterrence because while it is unlikely that an execution in a capital punishment state will have a deterrent effect in a neighboring abolitionist state,³⁸ it is plausible that its normative validation effects will extend beyond state borders. We should not, however, make too much of this point. Normative validation through exemplary punishment has never actually been shown to exist, and murder, particularly the kind of murder that results in the death penalty, is so generally disapproved of at all levels of society that there is little *a priori* reason to believe that the death penalty must be substituted for life imprisonment to drive home the message that murder is wrong.

B. *A Common Sense Perspective*

Few people approach the data relating capital punishment to deterrence without some expectation of what they will find. Often their reaction to the data appears more reflective of their initial orientation than of the information presented. In principle, there is nothing wrong with this. If one has a well-grounded theory suggesting a particular relationship, one should be more skeptical of data rejecting that relationship than of data supporting it.³⁹ Preconceptions or, to give them a better sounding name, theoretical orientations, are also helpful in that they alert us to aspects of problems that particular data cannot illuminate. The dangers of strong theoretical orientations are that they may lead people obstinately to disregard the strength of conflicting evidence, and they may lead empirical researchers to choose tests or stopping points that do not give evidence counter to favored hypotheses a fair chance to appear. Such possibilities may be better evaluated if theoretical starting points are disclosed. I shall therefore sketch the preliminary orientation to the data that appears most reasonable to me. The reader may compare his preliminary orientation with mine, and may decide after reading my analysis of the evidence whether I have been misled by the views I begin with.

Instinctively, one would expect the death penalty to deter. Most of us are sufficiently afraid of dying that we would take extreme action to avoid a clear threat of death, and most of us remember occa-

38. It is not impossible for it to have such an effect because deterrence is a subjective and not an objective state. A potential killer might confuse another state's punishment system with that of his own, and the publicity given to an execution may emphasize for some the probability of getting caught, another outcome important to deterrence.

39. The orientation to statistics implicit here is commonly called Bayesian.

sions when the fear of punishment caused us to refrain from taking actions we deeply desired. However, our instincts regarding deterrence, like our retributive instincts, are insufficiently attentive to the system in which capital punishment is embedded. They hold no necessary implications for the expected deterrent efficacy of capital punishment.

The most important attribute of the system of capital punishment is the presence of life imprisonment as an alternative. This means that it is only the *marginal* deterrent effect of capital punishment that is important. The issue is not whether we slay murderers or free them; it is whether we send them to their death or to prison for life.⁴⁰ It is difficult to select from the array of activities which a death threat might induce us to drop any which we would engage in if the threat were instead that we would *only* be imprisoned for life. Of course to deny any marginal deterrent effect to the death penalty is not to deny the possibility that punishment deters, nor is it to deny the plausibility of a theory that postulates, within certain limits, an association between the severity of threatened punishment and the degree of deterrent effect. Thus, the plausibility of deterrence theory and the evidence that supports it does not necessarily imply a deterrent effect of capital punishment.⁴¹

The second aspect of capital punishment that suggests a minimal deterrent effect is the relative infrequency with which the death penalty is imposed.⁴² Rarely has a state executed a substantial percent-

40. To the extent people perceived convicted murderers as commonly serving terms of less than life at the time the data I shall review were collected, one might expect more of a marginal deterrent effect to capital punishment than where life imprisonment was regarded as the likely alternative. This would render equivocal the message conveyed by studies showing a deterrent effect of capital punishment, for it is possible that deterrent effects would have been the same had those executed been sent to prison for life. It is also the case that some convicted killers receive sentences of less than life imprisonment and many if not most serve less than a life term even if so sentenced. It may be that the publicity surrounding death sentences suggests that the overall sanction system for murder is more severe than it in fact is or would seem to be if the most serious offenders received and served life terms. This too would lead one to expect a deterrent effect to be associated with capital punishment.

41. Isaac Ehrlich, for example, writes as if this were the case. See, e.g., Ehrlich & Mark, *Fear of Deterrence*, 6 J. LEGAL STUD. 293 (1977). The point can be illustrated with an example involving sentences other than death. A community concerned about overtime parking enacts a law providing a mandatory ten-year prison sentence for those who allow their parking meters to expire. While a life sentence is clearly more onerous than a ten-year sentence, there is little reason to expect it will deter more. If the ten-year sentence does not persuade everyone to leave his car at home, it is unlikely that the life sentence will do this. For those who do park, it is hard to imagine how they can be any more careful concerning the time remaining on their meters than they will be if the penalty for letting the meter expire is ten years.

42. Conway has suggested that this feature may increase the marginal deterrent effect of capital punishment. See Conway, *Capital Punishment and Deterrence: Some Consideration in Dialogue Form*, 3 PHILOSOPHY & PUB. AFF. 431 (1974). He points out that while the certainty of capital punishment might not be much more terrifying than the certainty of life imprison-

age of its homicide offenders, and in most states at most times the proportion executed has been quite low.⁴³ Low execution rates suggest limited deterrence because, however much people fear death, they commonly prefer immediate gratification to a statistically higher chance of an unduly early demise. Decisions to smoke and to ignore auto seat belts are common examples. Supporters of capital punishment might argue that the lesson is that all killers should be executed,⁴⁴ but in reality we are unlikely ever to execute a large proportion of our homicide offenders.⁴⁵ The Supreme Court has not been reluctant to interfere with state procedures that do not allow adequate consideration of mitigating factors,⁴⁶ and most of the modern retributivists who have made the intellectual case for restoring capital punishment believe death is the deserved sanction for only a minority of homicides. In any case, whatever the future incidence of capital punishment, the studies we shall examine deal with situations where death was the penalty for only a small proportion of all murderers. For this reason if no other, we might expect these studies to reveal little in the way of a deterrent effect.

There is a third reason why we should expect little deterrence from the death penalty. The threat of death can only deter potential criminals who loosely calculate the costs and rewards of their behavior. Many homicides occur when the offender is highly emotional or under the influence of alcohol — situations in which rational calculation appears unlikely. Ironically, the very factors that inhibit rational calculation affect premeditation, so that homicide when rationality is impaired is not likely to be punishable by death.⁴⁷ To

ment, a 10% possibility of capital punishment may be much more frightening than a 10% chance of life imprisonment. I expect the argument is sound, but it misses a crucial point. Unless capital punishment is truly mandatory the perceived probability of the two punishments is unlikely to be equal. The sufficiently contemplative would-be murderer is likely to perceive his chance of drawing a life sentence at 40% in an abolitionist jurisdiction and his chance of drawing the death penalty at 2% (with a 38% chance of a life sentence) in a retentionist jurisdiction.

43. Bowers estimates that only about 2% of all homicides before 1950 and fewer than 1% after 1950 resulted in executions. W. BOWERS, *EXECUTIONS IN AMERICA* 24 (1974). This reflects, in part, the facts that not all killers are caught and not all homicides are capital. If, as some evidence suggests, between 15 and 25% of all pre-1960 homicides were in principle capital, executions have been the fate of at most 10 to 15% of all capital murderers in modern times.

44. Lehtinen, *supra* note 12.

45. See Morris, *Hans Mattick and the Death Penalty: Sentimental Notes on Two Topics*, 10 *TOL. L. REV.* 299, 311 (1979); Murchison, *Toward a Perspective on the Death Penalty Cases*, 27 *EMORY L.J.* 469, 552-53 (1978).

46. See, e.g., *Lockett v. Ohio*, 438 U.S. 586 (1978).

47. Ideally, the search for deterrence would exclude such homicides or at least treat them separately from premeditated murders, but the available data do not allow this. The statistical work, therefore, proceeds on the assumption that the proportion of capital to noncapital homi-

the extent that nonpremeditated murders predominate in homicide statistics, we can expect that deterrence will be relatively unimportant in determining homicide rates.

The three features that make it unlikely that capital punishment deters many homicides should not mitigate the effects of normative validation to nearly the same degree. Although a life sentence carries the message that murder is wrong, our willingness to apply the death penalty may be peculiarly effective in creating this impression. The infrequency of executions may not interfere with the normative message conveyed. Indeed, frequent executions might be counterproductive if normative validation is the goal, for at some point even a justified bloodbath might cheapen human life. Finally, while the likelihood of calculating pleasure and pain may diminish with alcohol or passion, one beyond reflection may still retain a sense of right and wrong and be influenced by it. Thus, those features of capital punishment which make us skeptical about whether it can be expected to deter should not make us doubt the possibility of normative validation. If we do not expect to find evidence of normative validation in the data, it is because we do not expect state executions to convey a sense of the sacredness of life or because we believe that message is so fully conveyed by other social institutions that those who have not learned to respect life in other settings are unlikely to learn this lesson from an occasional death sentence. To my mind these latter expectations are at least as plausible as the expectation of a normative validation effect.

The discussion of why we should not ordinarily expect capital punishment to be a substantial deterrent also suggests situations where a deterrent effect is plausible. Capital punishment might, for example, be expected to deter homicides by those serving life sentences and by those who have committed but have not yet been arrested for crimes punishable by life imprisonment, particularly

cides is relatively stable across states and over time. To the extent it is not, actual deterrent effects could be either hidden or unduly emphasized in the data we shall examine. In recent years there has been a dramatic rise in the ratio of stranger to family-friend murders. Since family murders are usually crimes of passion punished as second-degree murder or manslaughter, while stranger murders are more often first-degree murders, it might appear that this means there has been an increase in more deterrable kinds of homicides. This is not necessarily the case. Strangers murders in recent years are more often committed by juveniles who may be less responsive than adults to threats of future harm and who may know that as a matter of law or policy they are unlikely to receive the death penalty. Also, there has been an increase in felony murders. While these are typically capital, many are premeditated in only a constructive sense. If, for example, a gunman in the course of a robbery shoots a bullet into the ceiling to scare the victim and a piece of plaster falls killing him, it may be considered a felony murder. The data in the studies we shall discuss pertain generally to periods before these trends were well established, whatever their implications.

crimes such as kidnapping which allow time for rational reflection on the threat posed by witnesses. In these situations the marginal threat may loom large⁴⁸ and we might reasonably predict that the rate of homicides by life offenders is lower in death penalty than in abolitionist states. The question of whether we find this pattern is like the question of whether we fail to find those deterrent effects whose implausibility I have suggested in that it is a subject for empirical inquiry. Whatever our preconceptions, we should be open to the data.

Other kinds of homicides that one might think particularly likely to be deterrable by the threat of capital punishment are murders of police and prison guards, contract killings, and murders by terrorists. The murder of police and prison guards appears more amenable to deterrence than ordinary murder because potential killers might anticipate a higher than average probability of the death penalty for such slayings and so our second reason for being skeptical of the deterrent efficacy of the death penalty does not apply. However, at least in the case of police murders, the incentive to kill to avoid all punishment may be so strong as to overwhelm all deterrent effects.

Contract killings appear a good bet for deterrence because the rationality of the decision to kill means that our third reason for being skeptical of deterrence does not apply. Here, however, our instincts probably betray us because contract killers are apparently like most professionals in that they are specially skilled. Hence, they are rarely caught. Conceivably the presence of capital punishment could raise the market price of contract killings, and thereby save a few lives by reducing the demand for the services of professional killers. The number of lives saved would be a function of the elasticity of that demand. One would expect that number to be small, for those who dislike other persons intensely enough or who are otherwise so interested in their death as to hire a killer are unlikely to be dissuaded by small increases in price.

With respect to homicides by terrorists, Andenaes has convincingly argued that when a revolution is about to succeed or an invader about to be expelled, capital punishment is a substantially

48. What is crucial is the perception of the offender. The person under life sentence may perceive a killing as destroying all hope for parole, while the kidnapper may believe a life sentence is not likely unless he kills. Thus, deterrence theory warns us that in the absence of capital punishment stringent sentences or high mandatory punishments may have serious criminogenic effects in a small number of cases. The lesson may, however, be to change the sentence structure rather than to institute the death penalty. There may well be ways to make life sentences more onerous for those who kill while serving or facing life sentences. If so, the death penalty might again be relatively unimportant at the margin.

more effective deterrent than a life sentence because no offender expects a life sentence to last more than a few months.⁴⁹ However, this is not the situation in the United States today and few potential killers are likely to be so deluded as to think so. Thus, we should not expect to find this possibility of deterrence reflected in the data collected by those whose work we shall review.

Capital punishment might also prevent homicide if holding "political prisoners" stimulates terrorist assaults to free them. Strictly speaking, this is not a deterrent effect, but rather the removal by execution of an incentive to crime. If the United States ever had to deal with homicidal terrorists it might for this reason decide to execute those it captured. Here, however, the system of punishment is again crucial. While killing terrorists immediately would prevent attempts to trade their lives for others, according terrorists due process of law before their execution would provide ample time for further terrorist activity, and impending executions might encourage other terrorists to take retaliatory action. As with revolutionary killing, terrorist activity does not affect the studies we shall examine.

Finally, there are a number of ways in which we might plausibly expect a system of capital punishment to increase the homicide rate. The hypothesis that state executions degrade life and thus brutalize is intuitively as plausible as the theory of normative validation. There have apparently been cases in which people sought execution as a means of suicide and so, presumably, would not have killed in a state with no death penalty.⁵⁰ Those who think they are going to be executed for a crime may kill more recklessly to avoid capture than those who believe that life imprisonment is the maximum punishment. Even killing terrorists without due process may cost more lives than it saves, for revenge may be more likely than attempts to take hostages for ransom.

C. *The Empirical Research*

Having defined what we mean by deterrence and sketched the outline of a common sense perspective, we shall now examine the principal research on deterrence to see if the findings conform with these common sense expectations. If they do, we should expect to

49. Andenaes, *supra* note 30, at 967-68.

50. See, e.g., Diamond, *Murder and the Death Penalty: A Case Report*, in CAPITAL PUNISHMENT IN THE UNITED STATES, *supra* note 5, at 445; Solomon, *Capital Punishment as Suicide and as Murder*, in CAPITAL PUNISHMENT IN THE UNITED STATES, *supra* note 5, at 432; West, *supra* note 11, at 426-27. On the general issue of possible brutalization, see Glaser, *Capital Punishment — Deterrent or Stimulus to Murder? Our Unexamined Deaths and Penalties*, 10 *TOL. L. REV.* 317 (1979).

find little evidence that the existence of capital punishment deters. We shall not, however, be able unequivocally to attribute a failure to find deterrence to those reasons which suggest that the death penalty has little deterrent impact at the margin. It is possible that the death penalty does deter but that its deterrent impact is offset by homicidogenic effects. Should the extant research conflict with our expectations, we might, depending on the quality and consistency of the research results, have to reconsider our position: sufficient data of sufficient quality showing a deterrent or nondeterrent effect must be respected.⁵¹ If findings are mixed, we cannot escape the problem of evaluating conflicting evidence, for in a highly politicized area of social science it makes no sense simply to count the number of articles on each side. If the evidence is so mixed as not to suggest a conclusion, we should not lightly abandon our original theories unless our look at the data suggests that some of our premises are wrong. These judgments apply not only to the perspective I have presented but also to the differing perspectives of readers who have not been persuaded by my attempt to articulate what I perceive as common sense.

1. *Sellin and Others*

The early research on capital punishment, by which I mean all the work before *Furman v. Georgia*,⁵² failed to show that capital punishment deterred homicide. Although a failure to show a deterrent effect does not mean one does not exist, by 1972 there had been enough different work so that the conclusion that capital punishment does not deter appeared justified to most social scientists.

The work of one man, Thorsten Sellin, dominates this period, but before we look at Sellin's work, other research deserves mention. In an important early study, Schuessler examined several different kinds of data, using both a comparative and a before-and-after approach.⁵³ He reports that average homicide rates for the three five-year periods beginning in 1931 tend to be no higher (and are often lower) in the abolitionist states of Rhode Island, Michigan, Wisconsin, and Minnesota than in their retentionist neighbors. He presents

51. This is not to say that the research individually is of a generally high quality. All of it is flawed, some seriously so. Fortunately the flaws are often different, so that weaknesses of one study are strengths of another. Thus the research as a body is stronger than the sum of its parts. The major flaws common to some of the best studies are the limitations posed by homicide rate data that do not distinguish premeditated and nonpremeditated murders and the paucity of valid data measuring other variables of interest over time.

52. 408 U.S. 238 (1972).

53. Schuessler, *The Deterrent Influence of the Death Penalty*, 284 ANNALS 54 (1952).

data from Sweden and the Netherlands which show no apparent increase in homicide rates attributable to the abolition of the death penalty. He points out that South Dakota, which went from an abolitionist to a retentionist state in 1939, saw its homicide rate fall from 1.8 per 100,000⁵⁴ population to 1.5 during the next decade, but notes that North Dakota, which remained abolitionist, saw its rate fall from 1.8 to 1.1.

Schuessler also looks at the impact of executions. He finds that for forty-one death penalty states the correlation between the number of executions per thousand homicides and the homicide rate is $-.26$.⁵⁵ This is in the direction predicted by deterrence theory, but it is small and presumably statistically insignificant.⁵⁶ Contrary to the predictions of deterrence theory, when states are grouped into quartiles according to their homicide rates, the quartile composed of states with the highest homicide rates has a higher execution risk than the next two lower quartiles. Schuessler summarizes his view of his findings in the conclusion that "[t]he fact that men continue to argue in favor of the death penalty on deterrence grounds may only demonstrate man's ability to confuse tradition with proof, and his related ability to justify his established way of behaving."⁵⁷

Research investigating the deterrence question from different perspectives yields results consistent with Schuessler's conclusions. Dann examined homicides in Philadelphia for sixty days before and

54. All homicide rates described are per 100,000 population. This base will no longer be noted in the text.

55. A correlation coefficient is a way of summarizing the association between two variables. If the correlation coefficient is positive, increases in one variable tend to be associated with increases in the other. If it is negative increases in one variable tend to be associated with decreases in the other. A correlation of $-.26$ between execution rates and homicide rates suggests a moderate tendency for states high in execution rates to be low in homicide rates. The explanatory power of a correlation coefficient is best estimated by the square of that coefficient. Thus a correlation coefficient of $-.26$ means that if one knows the values taken by one variable he can explain about 7% of the variance (not 26%) in the associated variable.

56. A significance test indicates the probability that a pattern that characterizes certain data such as a pattern of association might be attributable to chance or random factors and not reflect actual patterns in the population being studied. The conventional level of statistical significance in the social sciences is .05 which means that one is justified in dismissing the hypothesis that a relationship is an artifact of chance if random effects alone could not be expected to result in a relationship like the one found on more than 5 occasions in 100 examined (or 1 occasion in 20). There is nothing sacred about the conventional .05 level. For some purposes one is justified in choosing a less rigorous standard to evaluate the possibility of random effects and for other purposes a more rigorous standard is appropriate.

Schuessler does not report a significance test. I presume the correlation is insignificant primarily because of the weight that Schuessler believes it deserves. Note that the correlation might be biased so as to favor a finding of deterrence because the number of homicides enters the numerator of the homicide rate and the denominator of the execution risk measure.

57. Schuessler, *supra* note 53, at 62.

after a publicized mass execution⁵⁸ while Savitz looked at first-degree murder rates in Philadelphia for the eight weeks before and after four highly publicized trials that culminated in death sentences.⁵⁹ Neither study reports a deterrent effect although both are hampered in their search for deterrence by the relatively small number of homicides that could be expected to occur in the periods they examine. Samuelson used Delaware's decisions to abolish capital punishment in 1958 and to reinstitute it in 1961 as the occasion for a before-and-after study.⁶⁰ He finds nothing which suggests that the homicide rate was affected by the period of abolition.

Perhaps the most intriguing finding during this period was reported by Graves, a California medical doctor.⁶¹ Graves took advantage of the fact that California scheduled all its executions on Fridays to compare homicide rates on the days preceding and following execution Fridays with the rates for the same days in non-execution weeks immediately preceding, following or falling between execution weeks. He reports that execution weeks have significantly more homicides than nonexecution weeks on Thursdays and Fridays and significantly fewer on Saturdays and Sundays. It is not clear what one should make of these curious results. One possibility is that the prospect of an execution has brutalization effects that culminate on the evening of the execution and are followed by deterrent effects after the fact of execution sinks in. A more plausible explanation may be that this is one of those occasions when statistical significance is achieved by chance. Enough research has been done on deterrence that one can expect random factors to result in some surprising associations.⁶²

While the early studies all suggest the same conclusion — that capital punishment does not deter — collectively they were probably less important in persuading the scientific establishment of that con-

58. R. DANN, *THE DETERRENT EFFECT OF CAPITAL PUNISHMENT* (1935).

59. Savitz, *A Study in Capital Punishment*, 49 J. CRIM. L. CRIMINOLOGY & POLICE SCI. 338 (1958).

60. Samuelson, *Why Was Capital Punishment Restored in Delaware?*, 60 J. CRIM. L. CRIMINOLOGY & POLICE SCI. 148 (1969).

61. Graves, *The Deterrent Effect of Capital Punishment in California*, in *THE DEATH PENALTY IN AMERICA*, *supra* note 1, at 322.

62. Because of its policy implications, deterrence research is unusual in the social sciences in that results that fail to reject the null hypothesis (*i.e.*, the hypothesis that the death penalty does not deter) are often published. Thus a possible explanation of the minority of studies that show a deterrent effect is that despite achieved levels of statistical significance their results are due to chance. Enough independent investigations of the death penalty have been done that a few should show "statistically significant" evidence of deterrence or brutalization even if the deviation from patterns that would be expected if the death penalty did not deter were only random.

clusion than the work of one man, Thorsten Sellin. Sellin's basic methodology was to compare the yearly homicide rates of neighboring retentionist and abolitionist jurisdictions.⁶³ One would expect neighboring jurisdictions to be alike with respect to factors other than the death penalty that lead people to commit crimes. If so, and if the death penalty deters, retentionist states should have lower homicide rates than nearby abolitionist jurisdictions.⁶⁴ Sellin showed that they do not.⁶⁵ Indeed, for the period from 1920 to 1955, abolitionist states tend to have lower homicide rates than their retentionist neighbors. Trends in homicide rates tend to be similar in neighboring states, suggesting that contiguous states are affected in much the same way by changes in social or environmental conditions that are conducive to or inhibit homicide. However, the implications of Sellin's time series approach are clouded because his data also reveal that one may not assume as a general proposition that neighboring states are similar on factors other than the death penalty that encourage or inhibit homicide. If neighbors were similar, Sellin's data would not — absent an implausibly large brutalization effect attributable to capital punishment — show the considerable gap in homicide rates that characterizes certain pairs of states such as Ohio and Michigan or Colorado and Kansas. The assumption is tenable for other states paired by Sellin, such as Iowa and Wisconsin, but it remains unproven.

A brick is not a wall. Sellin did not stop with his paired comparisons. He also looked at the way homicide rates changed when states abolished and/or reinstituted the death penalty. Data from Maine, Arizona, Colorado, Iowa, Missouri, Tennessee, Oregon, Washington, Kansas, South Dakota, and Delaware all fail to provide evidence that the presence of the death penalty deters. These results, when coupled with the contiguous state research, provide more powerful evidence of nondeterrence, for the methodologies are complementary. The contiguous state approach controls well for trends in

63. See T. SELLIN, *supra* note 13.

64. If one takes the deterrence doctrine seriously this conclusion is particularly strong because one would expect those intending to kill others to lure them to abolitionist jurisdictions and one would expect those engaging in felonies that might involve murder — such as armed robbery — to go out of their way to commit their crimes in abolitionist jurisdictions. Thus, a number of murders in abolitionist states will be murders that but for the lack of the death penalty would have occurred in the retentionist jurisdiction. Such effects would, of course, be mitigated by statistics which lumped unpremeditated homicides with first-degree murders and by the fact that in many first-degree murders the intent to kill does not arise until shortly before the slaying occurs. Nevertheless, it would be interesting to compare first-degree and felony murder rates for nearby border cities in retentionist and abolitionist jurisdictions.

65. Sellin's data are summarized in six diagrams in his book. T. SELLIN, *supra* note 13, at 26-33.

paired states but not for different initial conditions, while the before-and-after studies control better for the initial conditions of the states examined than they do for changes in these conditions over time. Even if they stood alone, the before-and-after studies, although crudely done, would be strong evidence. While it is plausible to suppose that capital punishment is abolished when homicide rates are falling and reinstituted when they are rising, thus explaining the lack of effects, in many cases the period of abolition was so brief that no trend could have been established. Furthermore, the homicide data from Arizona, Colorado, and Iowa are based on convictions. If juries are more reluctant to convict in close cases when the death penalty is likely, the evidence from these states is biased against a finding of nondeterrence.⁶⁶

Sellin reports a number of other statistics as well. He collects information on homicides or murder convictions before and after changes in the death penalty in Sweden, the Netherlands, Austria, New Zealand, England, and parts of Australia and Germany. Nothing in these data suggests that the existence of capital punishment has a deterrent effect.⁶⁷ He applies his comparative technique, controlling for city size, to police homicides from 1919-1954 in abolitionist and retentionist states, again not finding deterrence.⁶⁸ He reports that the annual average of policemen killed during the years 1961-1963, about 1.3 per 10,000, was the same in the abolitionist states as in their death-penalty neighbors.

Sellin also addresses the question of whether the death penalty is needed to deter those serving life terms.⁶⁹ His 1965 data from forty-seven jurisdictions show that thirty-seven of these shared a total of sixty-one prison homicides perpetrated by fifty-nine known and nine unknown offenders. Eight of the victims (but none of the eight prison staff who were killed) and eleven of the offenders were in abolitionist states. Of the thirteen offenders charged with first-degree murder, two were imprisoned in the abolitionist state of Michigan and eleven were in death penalty states. The three offenders who

66. One might argue, implausibly I believe, that murderers would be more willing to fight to the death to avoid capture or to make special efforts to escape in death penalty states than in abolitionist jurisdictions. More plausibly, one may note that if capital punishment prevents murder primarily through normative validation, brief periods of abolition are unlikely to have a substantial effect on the homicide rate.

67. T. SELLIN, *supra* note 13, at 38-50.

68. *Id.* at 55-57. These data were collected in a mail survey. They are weak in that the nonresponse rate was more than 50% and the reporting police departments may have differentially suffered failures of institutional memory.

69. Sellin, *The Death Penalty and Police Safety*, in CAPITAL PUNISHMENT, *supra* note 15, at 138.

had been convicted of second-degree murders and the nine who had been convicted of capital crimes other than homicide were imprisoned in jurisdictions that allowed the death penalty.

It is difficult to interpret these data without information about the number of people imprisoned for various crimes under various conditions in the different states, but one may *risk* a few conclusions. First, the 1965 data give us no reason to believe that the existence of the death penalty has a special deterrent effect on those serving life sentences or lengthy prison terms. (The fact that all the staff members killed were in death penalty states is of particular interest.) Second, those imprisoned for violent crimes have a disproportionate tendency to kill, and murderers may have a disproportionate tendency to kill within the group of violent criminals.⁷⁰ Finally, if all capital offenders were executed, a meaningful savings in life would occur.⁷¹ However, our inability to predict dangerousness means that such a policy would take many more lives than it would save. Furthermore, the vast majority of those executed would be killed unnecessarily, for if allowed to live they would not subsequently have committed murder.

The research by Sellin and others which fails to find deterrence shares more than a common conclusion. Each of the researchers approaches his data in a relatively straightforward fashion, easily understood by laypersons. In every case it is easy to specify the results that would indicate that capital punishment deters homicide, and in no case are such results found. Some of the studies, particularly Sellin's work, are attentive to the problem of controlling for factors that might mask a deterrent effect, but none uses the techniques of modern mathematical social science to hold these factors constant. Some more recent research shares this commonality of style and, interesting enough, supports the same conclusion.⁷²

70. It may be that the prospect of a lengthy sentence gives one a special incentive to kill either in the process of escape or out of frustration. If so, lives might be saved within prisons by reducing the sentences of serious felons. The problem is finding the point at which these savings are counterbalanced by increased crime outside the walls.

71. The net savings depends on the number of capital offenders among those killed by capital offenders. Sellin does not provide these figures.

72. The one exception I discovered is Lester. In a one page "article," *Executions as a Deterrent to Homicides*, 44 PSYCHOLOGICAL REP. 562 (1979), he reports that between 1930 and 1955, in 53.6% of 828 instances in which a state executed one or more offenders, the incidence of homicide decreased the following year. In only 46.7% of the 818 instances in which a state executed no one was there such a decrease. The difference is significant at the .01 level and, according to Lester, applies to years in which the incidence was increasing as well as to years in which the incidence was decreasing. In a second "article" of two paragraphs he reports that the likelihood that an execution year will be followed by a diminution in executions tends to be greater for years when executions are more common. Lester, *Detering Effect of Executions on Murder as a Function of Number and Proportion of Executions*, 45 PSYCHOLOGICAL REP.

King, for example, searched for a brutalization effect by comparing homicide rates for those months when South Carolina's major newspapers carried execution stories with the average of the rates for the same months during the years immediately preceding and following. Although King does not find compelling evidence of brutalization, he finds nothing suggestive of deterrence.⁷³ Fattah finds nothing in Canadian data which suggests that either Canada's 1962 moratorium on the death penalty or its decision in 1967 to abolish the death penalty for all but police murders had any effect on Canada's homicide rate.⁷⁴ Although that rate rose dramatically after 1962, the increase correlates almost perfectly with the increase in other categories of violent crime and is not as great. If the death penalty deterred, one would expect formerly capital crimes to increase at a faster rate than the rate for crimes whose penalties had not changed.⁷⁵ McKee and Sesnowitz, using regression analysis,⁷⁶

598 (1979). In neither article does Lester present enough of the underlying data or a detailed enough explanation of his approach to allow an intelligent discussion of his findings. In both articles it is possible that the result Lester identifies is either a regression artifact or a result of including years after 1960 when executions were rare and homicide rates were increasing for reasons that may have had nothing to do with executions.

A regression artifact is a tendency for rates that are extreme at one point in time to be less extreme upon remeasurement because of the nature of the contribution that random factors make to extreme scores. For example, if a homicide rate reflects both consistent causes and random effects, years following years with exceptionally high homicide rates are likely to have lower rates because random effects in the extreme year are likely to have been consistently conducive to homicide (thus making it extreme) while in the subsequent year they are likely to be more balanced since random effects usually, but not always, balance out. If homicide sentences are more likely in years with high murder rates one would expect that subsequent years, when executions are carried out, will have lower rates even if the death penalty does not deter because of normal statistical fluctuations. If executions are carried out in the year of the sentence, one would expect years following execution years to have lower homicide rates regardless of deterrence.

73. King, *The Brutalization Effect: Execution Publicity and the Incidence of Homicide in South Carolina*, 57 SOC. FORCES 683 (1978).

74. Fattah, *The Canadian Experience with Abolition of the Death Penalty*, in EXECUTIONS IN AMERICA, *supra* note 43, at 121.

75. One might argue, implausibly I believe, that most violent assaults are with intent to kill or at least with the knowledge that killing might result and so are deterred by the death penalty. However, the increase in crime in the 1960s was not confined to violent crimes. Other crimes, like auto theft, also increased at rates faster than the murder rate. It appears there was a general breakdown in "law and order" during this period, perhaps reflecting an increase in the proportion of people in their most crime-prone years.

76. McKee & Sesnowitz, *Capital Punishment: The Canadian Experience*, 6 J. BEHAVIORAL ECON. 145 (1977).

"Regression analysis" is a statistical technique for exploring a relationship between two variables while (in the multivariate case) holding the impact of other variables constant. For example, consider the equation of $H = B_1E + B_2G$ where H = the homicide rate; E = the rate at which convicted killers are executed; G = handgun sales per 1000 inhabitants and B_1 and B_2 are coefficients that indicate the weights that should be given to the two explanatory or independent variables, E and G , so that they will best predict to H , the dependent variable or

and Klein⁷⁷ make the same point with respect to United States data.

variable to be explained. This equation indicates that homicide rates in (let us say) a state are determined by the state's execution rate and gun ownership rate.

In a regression analysis based on the above equation the investigator says, in effect, let us take the model or hypothesized relationship that is specified in the equation and let us take the data we have collected on homicide rates, execution rates, and gun ownership and let us see if the data are consistent with the model. We learn from the output of the regression analysis how well we can predict to homicide rates if we know execution rates and gun ownership rates. This is typically indicated by the square of the multiple correlation coefficient, reported as R^2 . We can also learn whether either or both of our independent variables enhance our ability to predict to the homicide rate. This is typically done by evaluating the coefficients or weights attached to the independent variables. If they are zero or sufficiently close to zero that we are unwilling to discard the possibility that random factors explain any apparent relationship between independent and dependent variables (a possibility evaluated with the aid of significance tests), we tentatively conclude that changes in the independent variable are not associated with (and hence cannot cause) changes in the dependent variable.

An advantage of multiple regression is that it can reveal situations where an apparent association between two variables is an artifact of the way they both relate to a third variable. For example, suppose we had originally specified a model $H = B_1E$ and had found that the higher a state's execution rate the higher its homicide rate. Someone challenges this, arguing that homicides are really influenced by gun ownership and that we were fooled because states with high execution rates are also states in which many people buy guns. We then examine the data to see how they fit an equation that includes both E and G as independent variables. If the coefficient on the execution variable is close to zero it indicates that the critic's point was well taken. Once we take account of gun ownership rates, execution rates have no apparent effect on homicides. If the coefficient of E is negative, implying the lower an execution rate the higher a homicide rate, it suggests that if states had similar gun ownership rates those that executed more would have fewer homicides. Our initial pattern was reversed because, so our theory tells us, states that tend to execute their murderers are states where people like to buy guns, behavior that conduces to homicide and is associated with executions.

But, someone might ask, could not the relationship between homicides and executions be again reversed if a third explanatory variable were introduced into the model? The answer is that it could be. When a model does not include adequate indicators of those independent variables that in fact determine the state of the dependent variables or when the mathematical form of the variables does not reflect the relationship that actually exists in the data (as when an equation implies a linear relationship between changes in the independent and dependent variables and the actual relationship is curvilinear) the model is said to be misspecified. Practically speaking, no mathematical model confined to measurable variables can ever capture the complexity of the real world, so all models are inevitably misspecified. Whether the problem is so serious as to render the relationships that a model reveals, or the absence of any revealed relationships, suspect varies with the particular model and the behavior it is designed to reflect. In making such judgments, theory is crucial. If a model contains those variables that are theoretically plausible or adequate proxies for them, and if it specifies a reasonable relationship among variables, results consistent with the model should be given great weight and inconsistent results should call the theory into question. On the other hand, if a model is misspecified by, for example, omitting a theoretically important variable, the conclusions suggested by the model are suspect since the inclusion of a theoretically important variable can dramatically change the coefficients of those variables incorporated in the model.

Finally, one must recognize an inductive side to the task of model building. It is common for researchers to try to fit a variety of models to their data. The one which fits best is interpreted as the most likely representation of the actual relationship between variables. If the fit is good and the relationships reasonable in the sense that they are theoretically plausible and consistent with other research, we have reason to believe the model portrays important aspects of the relationship, but we cannot be certain that some model we have not tested does not do a better job.

77. Klein, Forst & Filatov, *The Deterrent Effect of Capital Punishment: An Assessment of the Estimates*, in *DETERRENCE AND INCAPACITATION* 336 (A. Blumstein, J. Cohen & D. Nagin eds. 1978).

Fattah's conclusion that the abolition of the death penalty is not responsible for the general increase in homicides is supported by his finding that police homicides, which remained capital, increased along with other murders.

Phillips, looking at homicides in London during the periods surrounding twenty-two well-publicized executions, presents results reminiscent of and as puzzling as Graves's findings.⁷⁸ If the four weeks before the twenty-two executions are taken as a baseline, one sees in Phillips' data a sharp dip in the number of homicides during the execution week and the week thereafter. However, during the second through fifth weeks after these executions, the homicide rate rises sufficiently above that of the baseline period as to, within the limits of plausible statistical error, offset any immediate deterrent impact. Phillips also presents data suggesting that the more publicized an execution the greater its temporary deterrent impact. Unfortunately, he does not tell us whether the more publicized executions contribute disproportionately to delayed brutalization effects. This is possible. In the seven days following each of Phillips's eleven most publicized executions, there are more than three times as many homicides (sixteen in all) than there are in seven days following each of his eleven least-publicized executions (five in all).

Finally, Bowers, in an analysis of abolitionist and contiguous death penalty states, finds that the increase in homicides after the informal judicial moratorium on executions in 1967 was slightly greater in the abolitionist states than in their contiguous death penalty counterparts.⁷⁹ If capital punishment deterred, one would expect those states which had lost an effective deterrent to have the higher rates of increase. Zeisel corroborates Bower's findings by showing that, throughout the sixties, homicide rates in executing and nonexecuting states (the abolitionist states and six states that executed no one after 1948) grew at almost the same rate.⁸⁰

The strength of the research reviewed thus far rests not in individual studies but on the work taken as a whole. Deterrent effects of capital punishment have been given many different kinds of chances to appear. If capital punishment has any strong deterrent effects, it is likely that some deterrence would have been evident. While it is

78. Phillips, *The Deterrent Effect of Capital Punishment: New Evidence on an Old Controversy*, 86 AM. J. SOC. 139 (1980).

79. EXECUTIONS IN AMERICA, *supra* note 43, at 139-47.

80. Zeisel, *The Deterrent Effect of the Death Penalty: Facts v. Faiths*, 1976 SUP. CT. REV. 317, 330.

impossible to prove a negative, this failure to find a deterrent effect provides reason to believe that none exists.

2. Enter Ehrlich

Although there were occasional dissenters (never with empirical evidence), the conclusion that the death penalty does not deter was the general consensus of the scientific establishment until 1975. In that year an economist, Isaac Ehrlich, published in his profession's most prestigious journal what is probably the most important article on capital punishment to date.⁸¹ The article, aptly subtitled "A Question of Life and Death," is important for its timing, its methods, and its results.

Ehrlich apparently finished work on his article about the time the Supreme Court was to hear argument on the constitutionality of the first of the post-*Furman* capital punishment statutes. At a time when the article was still unpublished, the Solicitor General of the United States included a draft version as an appendix to the government's pro-capital punishment brief. Because the Court eventually put the issue of capital punishment off for a term, both the article and pieces in rebuttal were in print by the time *Gregg v. Georgia*⁸² and its companion cases were decided. The use of Ehrlich's article by the Solicitor General guaranteed that it would attract substantial attention, perhaps more than it merited.⁸³

One aspect of this scenario deserves at least passing mention, although it is admittedly a digression from my chosen task. Ehrlich's research cannot be fully appreciated without the benefit of the scientific comment it engendered. Had the Supreme Court not delayed its decision on the death penalty, there would have been little or no prior opportunity for others to examine Ehrlich's work. Perhaps because of the Court's delay, there has not been the discussion of the scientific and legal ethics of submitting controversial unpublished research to the Court which the earlier disclosure of the Solicitor General's appendix might otherwise have engendered. The legal community should explore this problem before the next occasion arises.⁸⁴

81. Ehrlich, *The Deterrent Effect of Capital Punishment: A Question of Life and Death*, 65 AM. ECON. REV. 397 (1975).

82. 428 U.S. 153 (1976).

83. For example, Ehrlich's later cross-sectional study, which shows even greater deterrence and is probably a sounder piece of research, has neither been fully replicated nor subjected to the same degree of scrutiny. Ehrlich, *Capital Punishment and Deterrence: Some Further Thoughts and Additional Evidence*, 85 J. POL. ECON. 741 (1977).

84. The reader may correctly gather that I consider the ethical question a serious one,

Ehrlich's study was important because it was explicitly based on economic theory and because it brought the techniques of modern econometrics to bear on the problem of deterrence and capital punishment. Its methods have stimulated enough research so that we may credit Ehrlich with bringing a new paradigm to the study of the death penalty and deterrence.

Ehrlich's article was important because its finding that executions deterred homicide effectively reopened the deterrence controversy. Its immediate effects are reflected in Justice Stewart's lead opinion in *Gregg v. Georgia*, the case that restored death as a permissible penalty. Justice Stewart notes the debate occasioned by the statistical attempts to evaluate the death penalty as a deterrent and concludes: "*The results simply have been inconclusive.*"⁸⁵ Ehrlich's is the only empirical study suggesting deterrence that Stewart cites in support of this proposition. While it is unlikely that the Court would have decided *Gregg* differently but for Ehrlich's research, his results did mean that some Justices were able to avoid confronting the difficult question of how to justify a penalty that within the scientific community was generally acknowledged to take lives without compensating savings.

Since *Gregg*, Ehrlich's research has been used to do more than to establish the existence of an inconclusive debate. Van den Haag and other modern retributivists have used Ehrlich's findings to bolster their case for the death penalty.⁸⁶ In a more overtly political context, the effort to amend Michigan's constitution and end that state's 134 years without capital punishment has publicized Ehrlich's findings in its newspaper campaign. Clearly this is research that merits close examination.

To call an article the most important in its field is high praise, but this is about the last praise I shall have for Ehrlich. To anticipate briefly, Ehrlich's 1975 article provides no support for the proposition that the death penalty deters. It has stirred up the pond, but only to muddy the waters at a time when we need to see clearly. There is now a substantial body of research criticizing Ehrlich on technical

although I am not sure how I would answer it. It raises among other issues the question of the obligation of an attorney to evaluate or seek an independent evaluation of the scientific adequacy of work he wishes to present to a court. It also raises ethical problems for the scientific community whose members' work may be used in this way. I want to make it quite clear that I do not intend the above as a criticism of Professor Ehrlich for the use made of his work. My hearsay understanding is that the government sought out Ehrlich's study; he did not volunteer it.

85. 428 U.S. 153, 184-85 (1976) (emphasis added).

86. E. VAN DEN HAAG, PUNISHING CRIMINALS, *supra* note 1; van den Haag, *A Response to Bedau*, 1977 ARIZ. ST. L.J. 797.

and conceptual grounds.⁸⁷ The criticism is persuasive.

Ehrlich's study is a multivariate regression analysis of the relationship between annual homicide rates for the nation as a whole and the rate at which convicted murderers were executed between the years 1933 and 1969.⁸⁸ The variables Ehrlich attempts⁸⁹ to control include, most importantly, two measures of successful law enforcement: the probability of arrest for homicide and the probability of conviction given arrest. They also include measures of population characteristics that might affect the homicide rate, such as labor force participation, unemployment rates, and changing proportions

87. See, e.g., Baldus & Cole, *A Comparison of the Work of Thorsten Sellin and Isaac Ehrlich on the Deterrent Effect of Capital Punishment*, 85 YALE L.J. 170 (1975); Barnett, *Crime and Capital Punishment: Some Recent Studies*, 6 J. CRIM. JUST. 291 (1978); Black & Orsagh, *New Evidence on the Efficacy of Sanctions as a Deterrent to Homicide*, 58 SOC. SCI. Q. 616 (1978); Bowers & Pierce, *The Illusion of Deterrence in Isaac Ehrlich's Research on Capital Punishment*, 85 YALE L.J. 187 (1975); Klein, Forst & Filatov, *supra* note 77; McGahey, *Dr. Ehrlich's Magic Bullet: Economic Theory, Econometrics, and the Death Penalty*, 26 CRIME & DELINQUENCY 485 (1980); Passell & Taylor, *The Deterrent Effect of Capital Punishment: Another View*, 67 AM. ECON. REV. 445 (1977); Passell & Taylor, *The Deterrence Controversy: A Reconsideration of the Time Series*, in CAPITAL PUNISHMENT IN THE UNITED STATES, *supra* note 5, at 359; Peck, *The Deterrent Effect of Capital Punishment: Ehrlich and His Critics*, 85 YALE L.J. 359 (1976); Zeisel, *supra* note 80.

For Ehrlich's responses, see Ehrlich, *Deterrence: Evidence and Inference*, 85 YALE L.J. 209 (1975); Ehrlich, *The Deterrent Effect of Capital Punishment: Reply*, 67 AM. ECON. REV. 452 (1977); Ehrlich & Gibbons, *On the Measurement of the Deterrent Effect of Capital Punishment and the Theory of Deterrence*, 6 J. LEGAL STUD. 35 (1977); Ehrlich & Mark, *supra* note 41.

88. Ehrlich estimates his model for a variety of periods ranging from 1933-1966 to 1935-1969 and 1941-1969. He also measures the conditional probability of execution in several ways. Generally his results are consistent. Ehrlich transforms all variables except time into their natural logarithms. Although he states that his results are robust with respect to functional form, others who have replicated Ehrlich's research, e.g., Bowers & Pierce, *supra* note 87; Klein, *supra* note 77; Passell & Taylor, *supra* note 87, report that the significance of the execution variable disappears and the results sometimes become perversely positive if the natural values of the variables are used. Much of the technical exchange between Ehrlich and his critics concerns the relative desirability of the logarithmic transformations.

Transforming data is commonly done and often wise. Logarithmic transformations of all variables imply relationships in the form of elasticities (*i.e.*, relationships in which a proportionate change in an independent variable is associated with a proportionate change in the dependent variable) rather than linear relationships (*i.e.*, relationships in which an incremental change in an independent variable is associated with an incremental change in the dependent variable). Decisions on transforming data depend primarily on what theory suggests about the nature of the relationships, although there are tests that indicate inductively that one form may better represent the true pattern of association. In the case of Ehrlich's work there is no strong theoretical reason to prefer logarithmic to untransformed variables, although if Ehrlich's argument in response to his critics is accepted there may be some, albeit not dispositive, inductive reason. In research of this kind, relationships between variables are often similar in both direction and significance regardless of whether the data has been transformed. The fact that Ehrlich's results are form dependent is, as his critics contend, a further reason to be suspicious of them. This is because there is no good *a priori* reason to prefer a log-log specification to a linear one, and not because there is anything inherently illegitimate about the transformation procedure.

89. I use the word "attempts" because the quality of the data, particularly in the earlier years with respect to such things as conviction rates, is quite problematic. See Bowers & Pierce, *supra* note 87, at 187-92.

of nonwhites. Ehrlich's most important finding is summarized in his introduction: "On the average the tradeoff between the execution of an offender and the lives of potential victims it might have saved was of the order of magnitude of 1 for 8 for the period 1933-1967 in the United States."⁹⁰ This is basically what Ehrlich's equations tell us. I shall review only some of the less technical reasons why one who conscientiously wishes to rest the moral case for capital punishment on deterrence can get no comfort from Ehrlich's results.

Ehrlich criticizes Sellin's research on two counts: it considers only the legal status of the death penalty and not its application,⁹¹ and it fails to control other factors affecting the murder rate.⁹² Baldus and Cole defend Sellin from both charges.⁹³ They point out that in the debate over capital punishment the question is whether to change from a death penalty to an abolitionist jurisdiction, a question which Sellin's work addresses directly but Ehrlich's does not. They also point out that Sellin's matching method is an attempt to control for other variables which in the particular context of capital punishment may be as adequate as Ehrlich's. Finally, Baldus and Cole present data for 1960 that arguably show that the states matched by Sellin are similar on important law enforcement and socioeconomic characteristics.⁹⁴

Baldus and Cole are right on their first point, but their defense is telling only if retentionist states will in the future follow historic patterns of sparing most of those eligible for execution. Ehrlich's findings are surely relevant to the policy debate, for if he is correct, states adopting the death penalty may wish to change their patterns of sentencing,⁹⁵ and there is moral justification for allowing them to do so.

On their second point, Baldus and Cole are more persuasive in their attack than on defense.⁹⁶ They note that in a regression analysis, the omission of an important variable from the model tested may

90. Ehrlich, *supra* note 81, at 398.

91. *Id.*

92. Ehrlich, *Deterrence: Evidence and Inference*, 85 Yale L.J. 209, 223-24 (1975).

93. Baldus & Cole, *supra* note 87, at 170.

94. *Id.* at 179. The problem with these data are that they are for a single year, five years after Sellin's time series ends. Furthermore, on some variables it is not clear what degree of cross-state similarity is meaningful.

95. It should be noted that Ehrlich in his 1975 article, *supra* note 81, is quite restrained in discussing the policy implications of his research. He recognizes that increased executions may not be the preferred method of coping with the homicide problem and he never expresses personal support for the death penalty.

96. As was mentioned in my discussion of Sellin's work, some of the gaps in the homicide rates of matched states are so large that one can be sure that factors which significantly affect homicide rates are not well controlled.

not only prevent an adequate explanation of changes in the dependent variable (here the homicide rate), but may also distort the effects of those variables that have been included. Klein and his coauthors, who make a similar point, suggest that the average length of prison sentences for homicide and the availability of guns are two omitted variables that may be crucial.⁹⁷ Passell and Taylor would add racial tension and the frustration of unrealized rising expectations to this list.⁹⁸

I shall make three criticisms of Ehrlich's work. One goes solely to its policy implications while two challenge the validity of his results. In Ehrlich's model, the deterrent effects of the probability of execution given conviction are dwarfed by the deterrent effects of the probability of conviction given arrest. It is commonly thought that the possibility of capital punishment makes it more difficult to convict, and there is evidence that supports this view.⁹⁹ If the presence of the death penalty were to reduce the conviction rate for homicide by seventeen percent, Ehrlich's own findings indicate that executing would be counterproductive.¹⁰⁰ My intuition is that the presence of the death penalty would not reduce convictions this far, but it might well reduce them to the point where the tradeoff between executions

97. Klein, *supra* note 77, at 345-46.

98. Passell & Taylor, *supra* note 87, 67 AM. ECON. REV. at 448.

99. Ellsworth and Ross report that in North Carolina when a mandatory death sentence for first-degree burglary replaced a discretionary one convictions for this offense went from an annual average of 40 to an average of three. They also report a survey of 500 citizens in four municipalities in California. Among proponents of the death penalty, 60% claimed that if they sat on a jury in a murder trial they would require "much more" or "somewhat more" evidence to vote guilty if the relevant penalty were death. Forty percent of those opposed to capital punishment said they could never vote guilty in these circumstances. Ellsworth & Ross, *Public Opinion and Judicial Decisionmaking: An Example From Research on Capital Punishment*, in CAPITAL PUNISHMENT IN THE UNITED STATES, *supra* note 5, at 152, 166-69. However, where the death penalty is not mandatory it might be easier to convict because jury holdouts for acquittal might compromise on a verdict that saves the defendant from death. Also the possibility of the death penalty, whether or not mandatory, may make it easier for prosecutors to secure convictions by plea bargains.

100. In his 1975 article, Ehrlich notes that over the period 1933 to 1969 when the proportion of convicts executed for murder fell from 8% to zero, the probabilities of arrest and conviction given arrest generally increased. Ehrlich, *supra* note 81, at 405. In later responses to critics, Ehrlich notes that the estimated unconditional risk of conviction decreases from 39% in 1960 to 31% in 1969. See, e.g., Ehrlich, *supra* note 87, 67 AM. ECON. REV. 452. (An unconditional risk of conviction is the probability of conviction without taking into account the probability of arrest. Thus, one might report that 36% of all murders resulted in convictions — an unconditioned rate when the murder is taken as the starting point — or that 55% of those arrested for murder were convicted of it — a conviction rate conditioned on arrest.) However, here Ehrlich may be reading too much into uncontrolled data. This decrease may result from procedural constraints imposed on the police during this period or problems caused by case overload. Depending on the source of the data, it may also reflect bargained pleas to offenses other than homicide. Had the death penalty been imposed regularly during this period, the unconditional conviction rate might have been still lower.

and lives saved would have vitally different policy implications. One might, for example, be substantially less willing to tolerate the prospect of innocent people being executed or the existence of invidious discrimination within a system of capital punishment if each execution saved three lives rather than eight.

A second difficulty with Ehrlich's study, which he himself recognizes, is its failure to include any measure of the length of prison sentences in general and the probability of life sentences in particular. This is not a mere technical deficiency; it is fundamental. Without some measure of the probability of life sentences, Ehrlich's research does not address the fundamental issue in the debate. That issue is not whether executions deter, but *whether they deter more than prison sentences for life*.

Nothing in Ehrlich's data suggests that there would have been any diminution in deterrence had everyone who was executed been sentenced to life imprisonment instead. The implication that Ehrlich is finding a marginal effect depends on the assumption that the kinds of murderers who would have been executed or sentenced to life imprisonment during periods of frequent executions were sentenced to life imprisonment during periods when executions were infrequent. Jayewardene tells us that this assumption is untenable in the case of Canada.¹⁰¹ During the late 1960s, when the death penalty ceased to be applied to homicide offenders, the expectation of a term sentence for less than life *increased*. Furthermore, the positive correlation between the increasing homicide rate and the expectation of a prison term less than life was greater and statistically more significant than the negative correlation between the expectancy of a death sentence and the rising homicide rate. The same may be true of the United States, for the same factors which lead a state to cease executing may lead it to shorten its sentences so that the perceived penalty for even serious homicide becomes considerably less than life imprisonment.¹⁰² Thus, aspects of the sentencing structure other than the death penalty may entirely explain effects that Ehrlich would attribute to death.

The third problem with Ehrlich's research is so basic that if we

101. C. JAYEWARDENE, *supra* note 34.

102. The average time served for all nonnegligent homicides is remarkably short, typically less than ten years and in many cases less than five. See, e.g., Glaser & Zeigler, *Use of the Death Penalty v. Outrage at Murder*, 20 CRIME & DELINQUENCY 333, 336 (1974). For a controversy over the implications Glaser and Zeigler draw from these data, see Bailey, *Use of the Death Penalty v. Outrage at Murder: Some Additional Evidence and Considerations*, 22 CRIME & DELINQUENCY 31 (1976); Glaser, *A Response to Bailey*, 22 CRIME & DELINQUENCY 40 (1976).

accepted Ehrlich's model and thought his data sound we could properly regard his research as providing support for the proposition that during the years when the death penalty was regularly employed executions did *not* deter. Replication of Ehrlich's research consistently reveals that when data from the years 1965 through 1969 are eliminated from the analysis the impact of the conditional probability of execution on the homicide rate is no longer statistically significant. Indeed, excluding years after 1962 and treating variables in their natural rather than logarithmic forms produces insignificantly *positive* associations between the probability of execution and the homicide rate; that is, the data fit Ehrlich's model so as to suggest, although not at conventional levels of statistical reliability, that higher likelihoods of executions are associated with higher homicide rates.¹⁰³

One cannot fully understand the degree to which these findings destroy Ehrlich's conclusion without appreciating the strength of Ehrlich's approach. Ehrlich's argument that executions deter homicide is, in the first instance, not empirical. It is a theoretical argument drawn from Ehrlich's understanding of the economic model of human behavior. While one might reasonably have a very different conception of forces that affect potential murderers, Ehrlich's conception is sufficiently congruent with one accepted view of "economic man" that it should be taken seriously. Ehrlich uses empirical evidence to test the soundness of a theory. The fact that his theory, carefully specified in advance, is confirmed by his data gives us further confidence in the soundness of that theory. It is from that theory that we draw the conclusion that executions save lives. The empirical results serve only to confirm the theory and to supply us with an estimate of the trade-off.

However, nothing about the theory of economic man suggests that people ought to respond to incentives one way during the period 1933-1962 or 1935-1964, and another way during the period 1933-1969 or 1941-1969.¹⁰⁴ Thus, the sensitivity of Ehrlich's results to time destroys the theoretical underpinnings of his approach. Unless a theory can be offered that accommodates the temporal sensitivity

103. Passell & Taylor, *supra* note 87, at 362-63.

104. Ehrlich's response to his critics on this point is that truncating the data at 1962 or 1964 is statistically unsound because it sacrifices degrees of freedom needed to subject the theory to a fair test. See Ehrlich, *supra* note 92, at 214-17; Ehrlich & Randall, *supra* note 66, at 297. However, in his original article, Ehrlich presents several truncations at the other end of his time series, including one at 1941 which costs more degrees of freedom than the 1964 truncations and still yields statistically significant results.

of the data, Ehrlich's results are a statistical curiosity. There is no way to explain them.

To transform Ehrlich's results from evidence that executions deter to evidence consistent with the opposite conclusion, one must show that Ehrlich's model is more adequately specified for the period 1933-1964 than for the longer time frame. This is the case if there are factors not measured by Ehrlich's variables which might have had an important influence on the homicide rate in the 1960s but are not likely to have affected homicide rates at an earlier time. Possibilities noted in the literature include racial tension, the proliferation of handguns, the Viet Nam War, the political assassinations of the sixties and the disjunction between real achievement and rising expectations. Of these, the proliferation of handguns may be most important. Zimring has shown that in violent attacks guns are substantially more lethal than other likely alternatives,¹⁰⁵ and there was a marked upsurge in the purchase of guns for nonsporting purposes in the 1960s. Kleck has recently estimated a model designed to explain homicides during the period 1947-1973. He finds that the level of gun ownership is an important explanatory variable, while different measures of execution risk are statistically insignificant and often have perversely positive coefficients (*i.e.*, coefficients that suggest the more a state executes the higher its homicide rate).¹⁰⁶

3. *The Sharp Prediction*

Another way of evaluating Ehrlich's results is to treat them not as the test of a hypothesis but as a statement of one. That hypothesis is Ehrlich's "sharp prediction" concerning the elasticity of the murder rate with respect to the conditional probability of executions. Evaluating that elasticity at the average rates of murders and executions over the period 1935-1969 yields Ehrlich's much publicized conclusion that each execution might have saved eight lives. We can ask whether the data relating executions to homicide rates is consistent with this conclusion. Bailey has asked that question with respect to California,¹⁰⁷ North Carolina,¹⁰⁸ Oregon,¹⁰⁹ and Utah.¹¹⁰ His gen-

105. Zimring, *Is Gun Control Likely to Reduce Violent Killings?*, 35 U. CHI. L. REV. 721 (1968).

106. Kleck, *Capital Punishment, Gun Ownership, and Homicide*, 84 AM. J. SOC. 882 (1979).

107. Bailey, *The Deterrent Effect of the Death Penalty for Murder in California*, 52 S. CAL. L. REV. 743 (1979).

108. Bailey, *An Analysis of the Deterrent Effect of the Death Penalty in North Carolina*, 10 N.C. CENT. L.J. 29 (1978).

109. Bailey, *Deterrence and the Death Penalty for Murder in Oregon*, 16 WILLAMETTE L. REV. 67 (1979).

110. Bailey, *Deterrence and the Death Penalty for Murder in Utah: A Time Series Analysis*, 5 J. CONTEMP. L. 1 (1978).

eral approach is to use multiple regression analysis to measure the effect of executions on homicide rates within states beginning about 1910 or 1920 and ending about 1960,¹¹¹ controlling for changes in each state's nonwhite population, male population, unemployment rate, urban population, and population between twenty and forty-nine years old. Bailey measures homicide rates in two ways, explores the effects of lagged execution rates, and reports results for both ordinary and two-stage least squares. Whatever the particular method and measures, the results in each state are similar. Whether executions have a positive effect on the homicide rate (as they sometimes do) or their predicted negative effect, the effect is always small and statistically insignificant. Executions are invariably less important in predicting homicide rates than most or all of the control variables. Ehrlich's prediction receives no support from these data.

I have tried a conceptually simpler approach to testing Ehrlich's conclusion as an hypothesis.¹¹² It begins with the observation that in Sellin's contiguous states fluctuations in homicide rates over time tend to be similar. Thus, whatever the initially important differences in factors that predict to homicide, changes in adjacent states from year to year tend not to be dramatically different. If one execution saves eight lives, one would expect differences in annual homicide rates to reflect yearly differences in executions. The advantage of the more persistently executing state should increase with each additional execution. Indeed, assuming that Ehrlich is correct, one may calculate the expected effect of executions on homicide rates by multiplying the difference in the number of executions times eight and dividing by the population in 100,000s of the more persistently executing state. Thus, if a state of four million people executes five

111. Because Bailey needs information available only for census years to control for certain factors, he treats homicide rates as dependent only during census years and the two years preceding and following. The assumption is that state demographic characteristics do not change so rapidly that there is substantial error introduced by assuming that decile data is characteristic of the two years before and after.

Bailey changes his measure of homicide rates from Vital Statistics to FBI data for years after 1933 when the latter became available because he believes that the FBI data more closely approximate the rate of murders punishable by death. He may be right, but this switch is nonetheless unfortunate since the different biases of the two data sets can affect the results. The degree to which the results may be affected and the direction of any effects cannot be estimated from the information Bailey presents.

112. Lempert, *The Deterrent Effect of the Death Penalty: A New Look in an Old Light* (unpublished manuscript on file with the *Michigan Law Review*). This paper provides not only the results of this research, but also a detailed discussion of the rationale behind my approach and of the various assumptions, regarding such things as lag times and appropriate comparison periods, that guided the analysis of the data.

murderers in a given year, Ehrlich's results lead one to expect that the state's homicide rate for that year will be one per 100,000 less than it would have been had the state executed no one. The state's homicide rate should compare more favorably with the rate of an abolitionist neighbor than it does in years when the state executes fewer people.

This procedure has several advantages over Sellin's procedure, and two of them respond to Ehrlich's criticisms. It not only promises better control on other relevant variables (since each state is to some extent its own control), but it also allows comparisons between death penalty states and speaks to the issue of whether executions deter. Applying this approach to states examined by Sellin yields results quite inconsistent with Ehrlich's prediction. Overall there is no evidence that states do better than their neighbors in discouraging homicide in years when they are relatively more prone to execute. Almost all results are statistically insignificant, and about as many run counter to deterrence theory as support it. Of those results in the predicted direction, fewer than half suggest that a single execution saves as many as four lives.

In sum, the results that Ehrlich presents in his well-known article deserve no place in the debate on capital punishment. The research is flawed conceptually and methodologically, and conclusions that have been drawn from the study are not supported by either the state level data examined by Baily and me or, using Ehrlich's preferred techniques, by national data when different time periods are examined or when other plausible variables, like levels of gun ownership, are included in the regression equations.

4. *Other Econometric Approaches*

Ehrlich's work is the precursor of numerous studies using multiple regression analysis and, in some cases, simultaneous equation models.¹¹³ Most of these studies find no evidence that executions deter. The two best conceived studies, those of Forst and Knorr, use

113. A simultaneous equation model takes into account the reciprocal influences that may exist between variables. Thus the homicide rate is influenced by the execution rate if death sentences deter murder. However, the execution rate is influenced by the homicide rate if executions are most likely when murder rates are high. A model that controls for simultaneous relationships requires more than one equation and may be contrasted with a single equation model. Because the reciprocal interaction between homicides and execution appears reasonable if executions deter, simultaneous equation models are likely to test the deterrence hypothesis more adequately than single equation models. However, special problems that arise in testing simultaneous equation models may limit their utility. See Fisher & Nagin, *On the Feasibility of Identifying the Crime Function in a Simultaneous Model of Crime Rates and Sanction Levels*, in *DETERRENCE AND INCAPACITATION*, *supra* note 77, at 361.

temporal cross-sectional models.¹¹⁴ Neither Forst, who examines the years 1960 and 1970, nor Knorr, who looks at 1950 and 1960, finds evidence that executions deter. However, both studies have drawbacks that make them of limited relevance to the policy debate. The major drawback to Forst's study is his choice of years. By 1960, executions were already so infrequent that the subsequent decrease to zero may not be a fair measure of the deterrent efficacy of an active system (even by historical standards) of capital punishment. Knorr's study suffers because the unavailability of state data forces him to measure certain important effects at the national level. Holding these variables constant across states and regions undermines the strongest feature of his approach.

There have been a number of recent examinations of the time series data that explore different time periods, use different functional forms, and control for different variables. Among the studies that fail to find a significant deterrent effect of executions are those by Bailey,¹¹⁵ Bechdolt,¹¹⁶ Kleck,¹¹⁷ McKee and Sesnowitz,¹¹⁸ Passell and Taylor,¹¹⁹ and Shin.¹²⁰ Probably the most provocative of the recent times series analyses is a study by Bowers and Pierce exploring the impact of executions on homicides in the state of New York between the years 1906 and 1963.¹²¹ Looking at the relationship between executions and homicides in the months following executions, they estimate that each execution leads to two or three homicides that would not otherwise have occurred. This brutalizing effect is strongest during the first month after an execution and has largely dissipated by the end of the next month. The authors also point out that a number of the econometric analyses,¹²² as well as the less tech-

114. See Forst, *The Deterrent Effect of Capital Punishment: A Cross-State Analysis of the 1960's*, 61 MINN. L. REV. 743 (1977); Knorr, *Deterrence and the Death Penalty: A Temporal Cross-Sectional Approach*, 70 J. CRIM. L. & CRIMINOLOGY 235 (1979).

Cross-sectional research on the death penalty typically takes a cross-section of some or all of the fifty states and examines differences among them. Temporal or time series research examines relationships in a single jurisdiction as they change over time. The studies by Forst and Knorr combine these approaches.

115. See articles cited in notes 107-10 *supra*.

116. Bechdolt, *Capital Punishment and Homicide and Rape Rates in the United State: Time Series and Cross Sectional Regression Analyses*, 6 J. BEHAVIORAL ECON. 33 (1977).

117. Kleck, *supra* note 106.

118. McKee & Sesnowitz, *supra* note 80 (Canadian data).

119. Passell & Taylor, *supra* note 87.

120. K. SHIN, *DEATH PENALTY AND CRIME* (1978).

121. Bowers & Pierce, *Deterrence or Brutalization: What is the Effect of Execution?*, 26 CRIME & DELINQUENCY 453 (1980).

122. Bowers and Pierce cite the work of Kleck, *supra* note 106, Klein, *supra* note 77, Bailey, *supra* notes 107-110, and Passell, *The Deterrent Effect of the Death Penalty: A Statistical Test*, in *CAPITAL PUNISHMENT IN THE UNITED STATES*, *supra* note 5, at 398. A number of

nical work of Dann,¹²³ Savitz,¹²⁴ Graves,¹²⁵ and King,¹²⁶ are consistent with their results in that these studies, even if not producing statistically significant results, tend to show a positive association between executions and homicides.

This study by Bowers and Pierce is an admirable first step in the search for the possible brutalization effects of executions, but it is obviously not the last word. It is limited by its focus on one state and by the limits that monthly data place on the ability to control for other factors.¹²⁷ Also, in view of Phillips's findings,¹²⁸ one wishes that Bowers and Pierce had looked at homicides in the execution month. If Phillips findings generalize, one would expect that homicide rates during execution months would diminish substantially enough to offset later brutalization effects.¹²⁹

Apart from Ehrlich's work, the only two time series analyses suggesting deterrence that I found in my search of the literature are by Yunker¹³⁰ and Wolpin.¹³¹ Yunker's study is so idiosyncratic in its methodology that it could be dismissed out of hand even if his results did not imply the untenable conclusion that each execution prevents 156 murders.¹³² Wolpin, working with the British data, estimates that each execution prevents four homicides. Unfortunately, Wolpin's results are presented in summary fashion, so it is difficult to evaluate the study. Wolpin acknowledges that there are difficult methodological issues to be resolved and speaks of "impor-

other studies in this genre, *e.g.*, K. SHIN, *supra* note 120, are also generally consistent with their observation.

123. R. DANN, *supra* note 58.

124. Savitz, *supra* note 59.

125. Graves, *supra* note 61.

126. King, *supra* note 73.

127. Bowers and Pierce are able to control for general time trends, seasonality, and World War II and they adjust their data to correct for autocorrelated error.

128. Phillips, *supra* note 78.

129. If an execution occurred at the very end of a month or at the very beginning, Phillips's results would lead one to expect little or no brutalizing effect in the month following the executions. Thus, by examining months that do not fit the general pattern of brutalization and by noting the dates of executions in preceding months, Bowers and Pierce have an easy if crude check on the generalizeability of Phillips's findings.

130. Yunker, *Is the Death Penalty a Deterrent to Homicide? Some Time Series Evidence*, 5 J. BEHAVIORAL ECON. 45 (1976).

131. Wolpin, *Capital Punishment and Homicide in England: A Summary of Results*, 90 AM. ECON. A. PAPERS & PROC. 422, (1978).

132. Yunker identifies the deterrence function using only 1960 data and controls only for the unemployment rate in his analysis. For criticisms of Yunker, see Fox, *The Identification and Estimation of Deterrence: An Evaluation of Yunker's Model*, 6 J. BEHAVIORAL ECON. 225 (1977); Sensowitz & McKee, *On the Deterrent Effect of Capital Punishment*, 6 J. BEHAVIORAL ECON. 217 (1977). See Yunker, *An Old Controversy Renewed*, 6 J. BEHAVIORAL ECON. 1 (1977), for an indication that the author no longer has complete faith in his results.

tant limitations of the data."¹³³ Polinsky, in a brief comment on Wolpin, mentions two such limitations: Wolpin does not control for the possibility that the average time served for homicide might have decreased as execution rates diminished, and Wolpin's model does not consider the immigration of different racial groups which may have accounted for the rapid increase in the English homicide rate after 1961.¹³⁴

In addition to the studies by Forst and Knorr mentioned above, cross-sectional research by Bechdolt,¹³⁵ Black and Orsagh,¹³⁶ Boyles and McPheters,¹³⁷ Passell,¹³⁸ and Shin¹³⁹ fails to reveal a deterrent effect. Studies by Cloninger¹⁴⁰ and Ehrlich¹⁴¹ find a deterrent effect with cross-sectional data. Cloninger, using a single equation model, finds that the execution rate over the years 1955-1959 has a significant negative effect on homicides in thirty-two non-Southern — but not in sixteen Southern — states during 1960. As with Yunker, Cloninger's results may be rejected simply because of the implausibility of the conclusions that follow from them. For example, Cloninger's results imply that the number of homicide deaths in Ohio in 1960 would have been reduced from 311 to less than forty if only one more murderer had been executed during the years 1955-1959. Among the flaws in Cloninger's model are his failure to include information on sentence length and an execution variable based on five-year averages which, because of the decline in the number of executions in the late fifties, makes state penal action in 1955 more important in determining differences in 1960 homicide rates than state penal action in 1959.

Ehrlich's 1977 paper is sounder in its approach to the problem

133. Wolpin, *supra* note 131, at 422-23.

134. Polinsky, *Economics and Law, Discussion*, 90 AM. ECON. A. PAPERS & PROC. 435 (1978).

135. Bechdolt, *supra* note 116.

136. Black & Orsagh, *supra* note 87.

137. Boyles & McPheters, *Capital Punishment as a Deterrent to Violent Crime: Cross Sectional Evidence*, 5 J. BEHAVIORAL ECON. 67 (1977).

138. Passell, *supra* note 122.

139. K. SHIN, *supra* note 120.

Shin looks not only at the states in cross-section, but he also looks at a cross-section of 20 countries. In this cross-section Shin finds the presence of capital punishment is significantly associated with higher homicide rates. However, these results might be substantially different if a different subset of countries had been examined or if additional controls, such as measures of police efficiency, had been available. Shin was only able to control for the inflation rate, percent urban population, degree of industrialization, the growth rate of the GNP, actual GNP, the unemployment rate, and the presence or absence of the death penalty.

140. Cloninger, *Deterrence and the Death Penalty: A Cross Sectional Analysis*, 6 J. BEHAVIORAL ECON. 87 (1977).

141. Ehrlich, *supra* note 83, at 741.

than his 1975 longitudinal study, but it has received much less attention. There has been no replication of this work, so it is difficult to determine how sensitive the analysis is to Ehrlich's choice of variables and functional form. Ehrlich candidly acknowledges a variety of problems with the data and the model. Taken together, the various deficiencies mean that although we can admire Ehrlich's effort, he has again produced a piece that deserves little weight in the debate on the deterrent effect of capital punishment.

Some of the problems with the study are familiar. The deterrent effect of convictions is considerably stronger than the effect of executions given convictions, so that if there is a sufficient trade-off between the two we would not expect executions to deter even if Ehrlich's results are correct. Also, Ehrlich is not able to measure the length of imprisonment among those eligible for execution but not executed, so he is again addressing the wrong question.¹⁴² Most importantly, the results do not unequivocally indicate that executions deter, and the coefficients of most control variables in the equations that do so indicate have surprising values, which suggest that the models are seriously misspecified.

In Ehrlich's full sample of states, his execution variable is consistently and significantly negative in its effect on homicide rates only when a dummy variable is used that distinguishes executing from nonexecuting states. The dummy indicates that executing states have significantly higher homicide rates than those that do not execute. Ehrlich suggests that this indicates the full model was misspecified. His preferred explanation is that, in assigning an arbitrarily low value of execution risk to nonexecuting states to allow logarithmic transformations of the execution risk variable, he understates the subjective risk of execution in those states.¹⁴³ While this

142. He does have a measure of median time spent in state prisons by murderers prior to first release, but the variable provides little or no information about the crucial question: namely whether the deterrent effects of executed death sentences exceed that of sentences to life imprisonment. Medians are particularly inappropriate to this kind of evaluation. They are typically used where extreme scores make the mean a distorted measure of central tendency. When we are interested in the relative efficacy of death sentences and life terms, we are interested only in the extreme prison terms. While Ehrlich doesn't say what crimes his murder category includes, it is likely that it includes, and it is probably dominated by, noncapital homicides. Furthermore, those sentenced to life and never released would not affect any measure based on time served before release from prison, while those released after many years (perhaps because life terms have been commuted) will reflect the sentencing patterns of years gone by. Yet Ehrlich's release data is only available for 1951. This is used in equations for both 1940 and 1950.

143. One cannot take a log of zero. Thus Ehrlich's model cannot, strictly speaking, be tested if it purports to include states with no executions and incorporates the log of the execution risk variable. To test his model, Ehrlich follows common practice and replaces zero scores with arbitrarily low figures to allow the logarithmic transformations. This may be reasonable

may be true of nonexecuting death penalty states, it seems implausible when applied to the abolitionist states which form the bulk of the states with no executions in the years examined.¹⁴⁴ Ehrlich's other explanation, that there are missing variables that differ significantly across executing and nonexecuting states, is an admission that the model is inadequate.

Misspecification is also suggested by a number of Ehrlich's results which, although explained after the fact, do not point in the direction that one would intuitively expect. Generally speaking, Ehrlich finds that unemployment and labor force participation rates are not significantly associated with homicide rates in either 1940 or 1950, and the percentage of families with incomes below one half of the median income shows no significant association with homicides in 1940.¹⁴⁵ The percentage of families in urban areas is negatively associated with homicide rates¹⁴⁶ while the proportion of the population between the ages of fifteen and twenty-four is negatively related to homicides in 1940 and not significantly related in 1950. Finally, states with higher median incomes tend to have higher homicide rates in both years. The only control variable that is consistently significant in what is indisputably the expected direction is the percentage of nonwhites in the population.¹⁴⁷ Although the deterrence variables are all in the predicted direction, a model which yields counterintuitive results on a number of theoretically important vari-

in death penalty states that have not executed in the years examined, since the fact that a state has a law providing for the death penalty may well mean that its citizens perceive some risk of execution for murder even though no one has been executed in the years examined or in the several preceding years.

144. Where nonexecuting death penalty states are included, they have not executed for four or five years prior to the year examined, suggesting that the perceived risk of execution in these states would be quite low relative to the perceived risk in states that have executed.

145. Ehrlich notes measurement problems with this variable and the median income variable for the year 1940. See Ehrlich, *supra* note 83, at 754 n.13.

146. Since Ehrlich uses urban homicide rates as the dependent variable in most of his equations, he argues that percent urban population does not have its intuitive meaning but is a correcting factor. However, the relationship is the same for 1940 and insignificant for 1950 when he replicates his results with state-wide homicide rates based on Vital Statistics data. My hunch is that this relationship exists because Ehrlich, unlike many who work with cross-sectional data, does not include a dummy variable in his model to capture factors unique to the South. The South was likely to have been relatively rural during the periods examined but to have had high homicide rates in its urban areas.

Ehrlich presents data by region pooled across the two time periods and indicates that the hypothesis of identical coefficients for Northern and Southern states cannot be rejected at the .05 level of significance. His choice of significance level is conventional, but the convention makes little sense when the null hypothesis is the favored one. One wants to know what the exact significance level is and one would like to know this for each period rather than for the pooled set.

147. This summary is based on Ehrlich's results for the subset of executing states. Results are generally similar in the full set.

ables cannot be trusted with respect to results that are as predicted.¹⁴⁸ Ehrlich's results are also suspect because the predicted trade-off of one execution for twenty to twenty-four lives is substantially less consistent with the findings of other researchers than are his 1975 results.¹⁴⁹

Reading the econometric studies, including many that find no evidence that executions deter, I am reminded of the story of the drunk who lost his keys one dark night. Although he thought he had lost his keys in the middle of the block, he looked for them at the corner because the light was better. If we assume a sufficiently black night, the drunk was not acting foolishly, for he certainly could not have found his keys in the dark. However, when he had good reason to believe the keys were elsewhere, he was unlikely to find them under the light. The econometricians who have searched for a deterrent effect of executions are a bit like that drunk. Their techniques require substantial light in the form of reliable data which is not only consistently associated with underlying concepts but is also available over time and across jurisdictions. The search for deterrence often is guided, quite understandably, by the availability of decent data rather than by those theoretical considerations which suggest fruitful places to look. Thus, cross-sectional research in the econometric tradition often seeks to explain 1960 homicide rates even though execution rates had by then diminished so substantially that historically important deterrent effects might well have disappeared. This preference for a weak test of the deterrence hypothesis is explained by the fact that statewide census data for 1960 is richer than the data available for preceding census years.

Longitudinal studies, on the other hand, tend to rely on national data even though theory suggests that it is state execution policies which are crucial, and we know that many states differ substantially from national norms. The specification of national models does not reflect a perverse preference for less powerful tests; it is all one can do when crucial state data are unavailable over time. Where the econometric modeling is more closely responsive to theory, as with Ehrlich¹⁵⁰ or Knorr,¹⁵¹ the quality of the available data may pre-

148. For reasons I give in my effort to establish a common sense theoretical position, I also find Ehrlich's prediction of a deterrent effect to capital punishment intuitively implausible. Note that the kinds of demographic variables that are insignificant in Ehrlich's analysis or, arguably, away from the predicted direction, are usually more important in explaining homicide rates than the deterrence variables. See, e.g., Bailey, *supra* notes 107-10.

149. While I reject Ehrlich's results, I have more admiration for this effort than for his earlier work. He is sensitive to many of the problems that inhere in the available data and in the analyses they allow.

150. Ehrlich, *supra* note 83, at 741.

151. Knorr, *supra* note 114.

clude preferred techniques of model building and may lead to results that are suspect or even meaningless.¹⁵²

I do not want to overstate this point. Where an econometric study appears generally sound, its results should not be quickly dismissed because of inevitable questions about theoretical choices or data quality. If the econometric studies generally revealed a deterrent effect associated with executions, this finding would have to be taken seriously. As it is, the body of econometric research overwhelmingly favors the conclusion that executions do not deter. This evidence, together with the simpler but more revealing work of Selin and others and our initial theoretical perspective, is sufficient to justify the conclusion that capital punishment, as administered historically in the United States, does not prevent more homicides than it may cause. Do we have absolute proof that capital punishment, as historically administered, does not save lives? No; we can never have such proof. But when we look at all the evidence, we find proof to a moral certainty.

"Proof to a moral certainty" — as a social scientist I am uncomfortable in writing such words. Let me offer an example that conveys my meaning more precisely. Imagine a group of people living on the shores of a great lake who were convinced that their crops would be destroyed by a monster living in the lake unless each year one of their number were sacrificed to the monster. While they were civilized enough to believe that killing was generally immoral, in this instance they thought the sacrifice justified by the harm it avoided.

For years the sacrifices continued in the belief that they were needed to save large numbers from starvation. But at some point, as views about the causes of crop failure changed, a few people suggested that perhaps there was no monster in the lake and the sacrificial killings served no purpose. Immediately the lake was dragged, albeit with a large mesh net. No monster was found, but the sacrifices went on. The mesh was too large to guarantee that there was no monster in the lake, and the risk that an existing monster had not been discovered was too great given the great harm that such a monster might do. Over the years other techniques were used to spot the monster. Sonar revealed nothing, nets with smaller and smaller

152. For other difficulties with these approaches, see Brier & Feinberg, *Recent Econometric Modeling of Crime and Punishment: Support for the Deterrence Hypothesis?*, 4 EVALUATION REV. 147 (1980); Fisher & Nagin, *supra* note 113; Gibbs, *A Critique of the Literature on Capital Punishment and Deterrence*, 6 J. BEHAVIORAL ECON. 279 (1977); Glaser, *The Realities of Homicide Versus Assumptions of Economists in Assessing Capital Punishment*, 6 J. BEHAVIORAL ECON. 243 (1977).

mesh turned up nothing, divers saw nothing. Occasionally someone would report spotting the monster, but upon investigation these reports always proved unreliable. Eventually a point was reached where the lake had been searched with reasonable care. Was it certain the monster was not there? No; there might be an unknown cave along the lake bottom that had not been searched, or the monster might have been so much smaller than people thought that it would not be recognized if seen, or it might be so small as to be undiscoverable by the techniques used. (Of course, the smaller the monster the less crops it would eat and the less people would suffer if the sacrifices stopped.) Still the sacrifices continued. People who had been raised on the myth (if it was a myth) of the monster and who had not closely followed the fruitless searches continued to believe the sacrifices necessary, particularly if they thought those sacrificed had little right to live anyway.

Yet, belief in the monster, however widespread, could not breathe life into a creature that had never been real or had long since died. Those concerned with the morality of the sacrifice came, some more reluctantly than others, to realize that they could no longer in good faith justify sacrificial deaths by the need to placate a crop-eating monster. Despite the possibility that the searchers had missed an actual monster, enough unsuccessful attempts had been made to find the beast that the moral decision regarding the sacrifice had to proceed *on the assumption* that the monster was a myth. As the community leaders realized, taking life could not be forever justified by reference to a theory whose predictions continually failed to materialize. The failure to find traces of the monster must at some point be dispositive in the moral debate — whatever the next search party might find. Otherwise there could be no good faith debate.

This allegory captures what I mean when I write that, within the limits of historical patterns of execution, the failure of the death penalty as a deterrent has been proved *to a moral certainty*. It may never be possible for social scientists to be certain that the death penalty does not deter homicide,¹⁵³ but there is now enough research that fails to reveal deterrence that for purposes of moral argument one must proceed as if the death penalty does not deter.¹⁵⁴ At some

153. If there is a substantial brutalization effect to the death penalty it might be possible to say that if the death penalty deters, its deterrent effects are outweighed by its tendencies to encourage killing.

154. For two papers that might be read as implying that this judgment may overstate the evidence, see Barnett, *The Deterrent Effect of Capital Punishment: Yet Another Study*, and Barnett, *The Deterrent Effect of Capital Punishment: A Test of Some Recent Studies* (unpublished papers on file with the *Michigan Law Review*). The core of Barnett's argument is that

point possibilities become so mere that they cannot serve as a moral basis for action.¹⁵⁵ This does not mean that research on capital punishment and deterrence should stop, nor can it guarantee that matters will always seem this way.

CONCLUSION

I have written at great length. Let me conclude briefly. Morally, there are two permissible bases for capital punishment — retribution and deterrence. Retribution, despite an honest appeal to human emotion, cannot justify a system of state executions inevitably tainted by mistake, bias, and caprice. Deterrence can justify capital punishment if systems of capital punishment save lives. There is little reason to believe that the availability of capital punishment is — except possibly in certain rare circumstances — a substantial marginal deterrent. The empirical evidence is overwhelmingly to the contrary and is sufficiently strong and one-sided that we should

executions have been so infrequent with respect to homicides and other influences on homicide rates are so important that one could not expect the econometric research to reveal deterrent effects of any likely magnitude. In terms of my allegory, it is as if all search parties were using nets whose mesh was larger than the monster they expected to find. I think Barnett's papers are well worth reading, but I am not at this point sufficiently persuaded to change my judgment on this matter. Barnett explicitly analyzes only three cross-sectional econometric studies. He does not consider time series research or approaches other than regression analysis. Also, from his perspective, which is shared by the econometricians he criticizes, it is the number of executions that makes the difference. His argument would not follow if the first execution were particularly important or if the presence of the death penalty made a substantial difference. Such effects, if they existed, might well be expected to be revealed in the data. For a judgment of the capacity of standard econometric approaches to shed light on the deterrent effects of capital punishment that is similar to Barnett's but based on different considerations, see Klein, Forst & Filatov, *supra* note 77.

In reaching my judgment about the proper import of the evidence of deterrence for the moral debate, I am considering the role that arguments from deterrence should have on the issue of whether capital punishment is justified for first-degree murder generally or for some general subset (*e.g.*, particularly heinous) of first-degree murders. I do not believe there is enough evidence or a sufficient theoretical basis to preclude, in the moral sense I describe in the text, the argument that the death penalty is likely to deter rather specific subsets of murders such as those committed by people serving life sentences. What little evidence we have about such situations does not suggest deterrence but is too insubstantial to outweigh the plausible theoretical case that supporters of capital punishment may offer.

155. This, of course, does not preclude other moral bases for capital punishment such as retribution, but, as we have seen in Part I, the retributivist argument cannot justify a system for inflicting death that is biased or error prone. One might argue that if most of those executed deserve death one can make a moral case for the death penalty from deterrence even if the evidence suggesting deterrence is slight. I do not believe this is so. Slight evidence of deterrence is not the same as evidence of slight deterrence. The latter might justify the execution of some innocent people if this were necessary to secure the execution of many more guilty persons and if the cumulative effect of all executions were great. The former does not allow execution because it provides little reason to believe that any executions do any good. Even if there were evidence of slight deterrence, retributivism would not allow the moral case for capital punishment to be based on such evidence if achieving that slight deterrence meant the mistaken sacrifice of innocent or not sufficiently culpable people.

approach the question of the morality of the death penalty with the assumption that capital punishment does not deter. Putting the two arguments together, we must conclude that, however great its intuitive appeal, the renewed effort to punish by death cannot withstand moral scrutiny.¹⁵⁶

APPENDIX

In this appendix I would like to pursue the question of whether current retributivist justifications for the death penalty allow a system in which innocent people will, on occasion, be found guilty and because of that mistake, be executed. At the outset, I want to make clear that I shall not be arguing that one could not construct a philosophy that values justice above innocent lives and concomitantly, allows "mistaken" executions. I shall argue that the modern retributivists have not done so and that such a position is inconsistent with certain positions they do or would take as well as with some of the bases of their argument for the death penalty.

The opponent of capital punishment must admit that logic does not prevent people from valuing incremental justice above innocent life, and that we may be comfortable in doing so if a substantial increment in justice may be achieved at the cost of a few lives. For example, even if deterrence were not a consideration, we might think it appropriate for police to risk their lives in efforts to apprehend fleeing felons. However, when the death penalty is at issue, a special problem emerges which makes it difficult for retributivists to argue by analogy from this and similar examples.

The retributivist must show that for the special case of murder or for a special subset of murders, death is a more just sanction than life imprisonment. In the retributivist literature this showing is typically made by reference to the awesomeness of the crime — that is, to the evil of intentionally taking an innocent life — and to the intuition that in a just world such a crime demands the ultimate punishment. However, if the system which imposes the ultimate punishment cannot proceed without inevitably replicating the momentous harm — the slaying of the innocent — that justifies such punishment, the basis for the system is undermined.

Murder is a heinous crime in large measure because the harm to the victim cannot be undone or otherwise fully compensated. Whether we punish capitally or with life imprisonment, murder victims will not be resuscitated nor, putting aside the possible preventive effects of punishment, will other lives be saved. However, the decision not to allow capital punishment will save the lives of those innocent people and those less than fully culpa-

156. The reader will note that while I am bold in assessing the morality of systems of capital punishment I nowhere discuss their constitutionality. Those who believe that the Constitution does not permit states to administer severe punishment without a sound moral basis will have little difficulty in drawing lessons for the Court from my argument. I, however, am not certain about the implications of my conclusions for the constitutional debate, for I am not convinced that the eighth amendment forbids all punishments that cannot withstand moral scrutiny or allows all punishments that can. Thus, the relevance of this paper for the Court depends not only on the soundness of the arguments advanced, but also on the developing jurisprudence of the eighth amendment.

ble killers who would have been mistakenly executed. Thus, the unique value of innocent life, which is used to derive a conception of justice that occasionally requires capital punishment, also argues against a system that allows such punishment; if a state punishes capitally it will inevitably commit the terrible act necessary, in the retributivist scheme, to justify the killing of man. Furthermore, while state action cannot undo the harm caused by a murderer, the state is able, by rejecting capital punishment, to prevent additional harm which a retributivist would deplore.

The above conclusions point to an anomaly in the moral case for capital punishment, but not, as I have noted earlier, to a logical inconsistency. One might construct a justification for capital punishment that allows the state to shed innocent blood if the incremental justice of shedding guilty blood were thought to be worth it. But such a case would not have the appeal of most current arguments for the death penalty, and hence it is rarely made. Among its other difficulties, such a case would require supporters of capital punishment to admit that they were willing to sacrifice some number of innocent lives to the end of promoting what they see as justice. This would conflict with the claim often found in the retributivist literature that a punishment system should respect human life as an end value and not treat it — even in the case of the culpable — as a means to some greater good.

Retributivists will argue that the above discussion is vulnerable at least insofar as it assumes that inadvertent mistakes in the application of the death penalty are in some sense the moral equivalent of murder. For the retributivist this equation is misguided because a crucial element of the crime of murder — indeed the element that justifies the death penalty — is that the killing is intentional. Since the state does not intend to kill the innocent but strives mightily (albeit without complete success) to ensure that this will not occur, the state cannot be held morally responsible for the death of the innocent in the way that a murderer can.

This is an appealing argument, and I concede that it may be sound at the level of individual sentencing. A jury sentencing a man to death may not, if it has found the facts competently and in good faith, be held morally accountable for the wrong of condemning an innocent person. But the moralist who advocates a system of capital punishment is not in the same position as the juror who mistakenly condemns. Unless the moralist is ignorant of the history of capital punishment and of the fallibility of human beings, he knows that if the death penalty exists such mistakes are inevitable. If he intends to have a system of capital punishment, he intends to take innocent lives whether or not he wants to. Intentions are not defined by desires.

The fact that the moralist does not know which of the executed will be innocent may be important at a sociological or psychological level — those who participate in or observe executions may be comfortable in their ignorance — but it offers little at the level of principle. If the retributivist's principles do not allow the intentional taking of the innocent life as a means to greater justice — and for most moral retributivists they do not — they will not justify a system that makes such takings inevitable. Those who think that modern retributivist philosophies allow this confuse the comforts of ignorance with justification in principle. Statistical thinking is not only thoughtful, it is, in its own way, precise. For modern man, treating the

statistically predictable as other than inevitable is a form of false consciousness. The difference between the juror and the moralist is that even if the juror is mistaken he cannot be accused of bad faith when he claims that the person he has condemned is guilty; the moralist, on the other hand, cannot honestly say that the system he advocates kills only the guilty. In other words, the system advocate is responsible for knowing the parameters of punishment systems in a way that a juror — who is charged with evaluating just one person — is not.

Perhaps it is belaboring what is obvious to some and obviously wrong to others, but I think it helpful to elucidate the above points with a series of examples. First, consider a situation which will be judged similarly by most participants in the debate. Assume a society in which, according to the tenets of retributivism, ninety-eight people deserve to die. Unfortunately the populace is not accustomed to executions and will not punish the convicted by more than life imprisonment. However, if two innocent but unpopular members of the community were killed first, it would overcome the public's aversion to blood, and justice would be done in the other ninety-eight cases. Are we acting morally if we execute the two innocent people? Most retributivists would answer "no." We cannot take the lives of innocent persons to facilitate greater punishment and hence greater justice among a group of people who will be severely punished regardless.

(Those who would allow innocent people to be executed in this hypothetical situation might wish to stop here, for what follows assumes agreement on this example. If a case for executing known innocents exists in the modern literature espousing retribution, I have not found it.)

Does the moral situation change if we do not know which innocents we are killing? Suppose for example all one hundred prisoners are in a courtyard and after being told that ninety-eight deserve to die but two are innocent we are asked whether we would shoot all one hundred. I assume the answer will again be "no," for I can see no principled moral distinction between this situation and the situation where the two innocents are set before us to be shot first. In both situations we tolerate the killing of innocents in order to more justly — by our retributivist principles — treat the guilty. In each case we do not want to kill the innocent, but everyone we kill we kill intentionally and in each case we intend a system designed (albeit in small measure) to take innocent life. The fact that we did not want to design such a system does not mean we can close our eyes to what we have built.

Nor is the moral situation changed by our taking steps that might prevent the killing of the innocent so long as we know our steps will not be very effective. Suppose, for example, that two of our hundred prisoners were to be chosen at random to be freed and the rest executed. The hope would be that the two innocent prisoners would be freed and the ninety-eight guilty executed, and it is indeed possible that this would happen. But this happy coincidence would be unlikely in any given group, and its continual repetition would be virtually impossible if we executed enough groups of one hundred. Again, it is difficult to distinguish this situation from our first case. In neither one do we want to kill innocent people, but in both we have to if we are going to execute the guilty, and in both we intend a system that will have this effect.

Finally, we may try hard to develop a system that sorts the guilty from the innocent. If the system selects people for execution without error or with only lenient errors it would be morally permissible on retributivist principles. Indeed, if intentionality is crucial, so long as we could believe in good faith that our system worked without error it might be morally permissible to execute those it condemned. However, as evidence accumulated that innocent men have been erroneously killed despite systemic precautions and as we developed insight into sources of human fallibility (*e.g.*, the vagueries of eyewitness identification) that made error inevitable, we would find it increasingly difficult to distinguish the morality of this system from our first universally condemned example. In each case we intentionally construct a system that we know will necessarily execute the innocent however little we desire this result. We may be comforted by the fact that with our new safeguards we are making fewer than two errors in a hundred, but this should not amount to a moral difference. Modern retributivist philosophy does not suggest that our reaction to the situation originally hypothesized should be different if but one innocent person had to be executed to pave the way for the execution of 999 people who deserved death.

In any system of capital punishment we do not know what the error proportion is. I would be astonished if we executed people who did not participate in killings as frequently as two percent of the time. However, retributivism graduates penalties by blameworthiness, even when the offense is homicide. I would not be surprised if far more than two percent of our executions involved people whose mental state at the time they killed was not sufficiently culpable as to justify the death penalty by prevailing retributivist standards. Our justice system probably does a lot better in identifying killers than it does in measuring intentionality.

There is a doctrine of Catholic moral philosophy that might appear to give comfort to those who wish to argue that the last of my examples presents a system that as a moral matter is different in kind from the others I describe. This is the so-called doctrine of double effect. This doctrine is thought by some distinguished philosophers to be invalid. H.L.A. Hart, for example, writes that the doctrine "is used to draw distinctions between cases in a way . . . puzzling to me and to many other secular moralists."¹ Commenting on specific cases distinguished by the doctrine, Hart concludes: "There seems to be no relevant moral difference between them on any theory of morality."² Philippa Foot is more sympathetic but ultimately critical as well.³ But the decision to reject the doctrine is not crucial to my case. Even if it is accepted, it does not provide the moral basis needed to distinguish my fourth example from my first.

The thrust of the doctrine of double effect is perhaps best understood by example. To borrow one from Foot,⁴ suppose a man, *A*, is dying and can only be saved by a dose of some rare drug. However, five other men, *B*, *C*, *D*, *E*, and *F*, are also dying and each can be saved by one fifth of a dose of

1. H. HART, *Intention and Punishment*, in PUNISHMENT AND RESPONSIBILITY 113, 122 (1968).

2. *Id.* at 124.

3. P. FOOT, VIRTUES AND VICES (1978).

4. *Id.*

that same drug. If we give the drug to *B*, *C*, *D*, *E*, and *F*, thus dooming *A*, we would not be held accountable for a moral wrong. Indeed, even though we knew *A* would die because of our choice, most would argue that we were morally compelled to choose as we did. On the other hand, suppose the five could only be saved by killing a healthy man, *G*, and distilling a serum from his blood. Again we have the opportunity to trade one life for five, but most would agree that we would be acting immorally if we did so.

The doctrine of double effect explains our different moral reactions to the two situations. In the first situation, the death of *A* was no part of our plan to save the others; we simply knew it had to happen if we made the choice. In Bentham's terminology *A*'s death was an "oblique" rather than a "direct" intention. In the second example, *G*'s death was an essential part of our plan to save the others. Had we killed him, albeit in a good cause, it would have been with the direct intention of doing so.

The defender of capital punishment who wishes to rely on the doctrine of double effect might similarly argue that in his preferred system there is no desire to kill the innocent. Any "intention" to do so is only oblique and not part of his design to achieve justice. However, there are at least two reasons why the "double effect" argument does not morally justify a system of capital punishment that inevitably kills innocent people even if it provides a satisfactory basis for other moral choices that necessarily doom the innocent.

First, the double-effect doctrine is one of the last resort; it is typically used to justify decisions where death or some equivalent horror is inescapable no matter what the choice. Thus, if in our example *B*, *C*, *D*, *E*, and *F* would not die if the drug were given to *A*, but would instead suffer pain while awaiting the next shipment of the drug, the doctrine of double effect would not allow us to prefer alleviating the group's pain to saving *A* from death. The choice of whether to allow the death penalty is like this last example. If we allow it innocent people will certainly die, but if we don't allow it, not only will we save the innocent, but our failure to execute those who deserve to die does not mean that they go unpunished. Murderers are punished severely if they are imprisoned for life. Thus, when the desirability of a system of capital punishment is at issue we are not confronted by the dilemma that legitimates moral justification by reference to the doctrine of double effect.

Second, as Philippa Foot nicely points out, the distinction between direct and oblique intention plays only a subsidiary role in explaining our reaction to the difficult problems the double-effect doctrine appears to resolve. The distinction between avoiding injury and bringing aid is far more crucial to our moral judgment.⁵ The former obligation is substantially stronger than the latter. Thus, Foot postulates the situation of five people in a hospital whose lives could be saved by the manufacture of a certain gas that unfortunately but inevitably releases lethal fumes into the room of another patient whom for some reason we are unable to move. That patient's death is clearly an unintended side effect of the action we want to take and in this sense it is similar to the situation of *A*, who will be denied a rare

5. *Id.* at 29.

drug. Yet, morally the decision to save the five and doom *A* is far less troubling than the decision to manufacture a gas that we know will kill a bystander. In the one case we are failing to avert a tragedy that cannot be averted except at the cost of greater grief. In the other case we are knowingly sacrificing (Foot says "*using*") a person for a system that can only benefit others.

Systems of capital punishment are like Foot's case of the lethal gas. We are knowingly using the lives of some innocent people (*i.e.*, not avoiding injury) to maintain a system that will allow the deaths of others who, in our view, deserve that fate. True, the analogy would be more exact if we did not know until after we manufactured the gas whether the poisoned room was occupied, and it turned out that it often was not or did not appear to be. However, once we had sufficient experience to know the room was sometimes inadvertently and unwillingly occupied and there was nothing we could do about it, the moral quality of the decision to allow the gas to be made is the same, except insofar as utilitarian considerations would lead us to evaluate matters differently if the proportion of people saved to people killed was greater. Thus, those circumstances that typically coincide with intentionality and give the doctrine of double effect its intuitive appeal do not upon close analysis strengthen the moral case of those who advocate the death penalty in an imperfect world. It does not allow us to distinguish morally between our original hypothetical in which two people were knowingly sacrificed to enable us to kill ninety-eight who deserved death and our fourth hypothetical in which we knew for certain that innocent people would be killed if we had the death penalty, but we did not desire their deaths or know before the fact who they would be.

To say that there are no moral distinctions between these two cases is not to say that there are no important distinctions. As individuals and as a society we are clearly going to be more comfortable with the fourth situation than with the first. In the one we are capable of deceiving ourselves and in the other we are not. This difference has important implications. For one thing, it will be easier to hire executioners and to secure participants at other stages of the condemnatory process if the innocent do not stand out as such. For another, the claimed value of the innocent life is less *obviously* contradicted in the fourth situation than in the first, so society might get away with treating each execution as an affirmation of the supreme value of the innocent life rather than as an event that is only possible because innocent lives are not supreme.

However, these advantages of the fourth system over the first are psychological and sociological. Unless we are willing to reduce morality to what is sociologically and psychologically comfortable, they are not part of a principled moral theory. In other settings the committed retributivist would be the last to confuse what feels comfortable with what is right. We need only consult the classic list of deadly sins to know that the comfortable is often wrong. Retributivism cannot find refuge here. Indeed, if philosophical consistency is the test, most modern retributivists can find refuge only in systems that assume away the imperfections of the world. As Walter Berns, a noted defender of the death penalty wrote:

Whether the United States, or any of them, should be permitted to carry out executions is a question that is not answered simply by what I have

written here [in the defense of the death penalty]. The answer depends on our ability to restrict its use to the worst of our criminals and to impose it in nondiscriminatory fashion. We do not yet know whether that can be done.⁶

One must admire Berns for his frank recognition of reasons why the retributivist case for the death penalty, which he makes as eloquently as anyone, has no necessary moral implications for actual decisions on how to punish murder. My only criticism is that we do know whether what he thinks necessary can be done. The history of capital punishment, theories of human fallibility, and our experience following *Furman* tell us that Berns's conditions have never been met and give us no reason to suppose they ever will be.

6. Berns, *Defending the Death Penalty*, 26 CRIME & DELIQUENCY 503, 511 (1980).