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Straining the Capacity of the Law: The Idea of Computer Crime in the Age of the Computer Worm, 11 Computer L.J. 299 (1991)

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NOTES

STRAINING THE CAPACITY OF THE LAW: THE IDEA OF COMPUTER CRIME IN THE AGE OF THE COMPUTER WORM

I. INTRODUCTION

The purpose of this Note is to consider whether traditional justifications for the criminalization of conduct are adequate to encompass new forms of "criminal" behavior arising out of advanced computer technology. Recent acts of Congress have shifted the debate away from arguments about how to categorize the abuse of technology towards a debate about whether there is any justification for subjecting computer hackers to the strictures of the criminal law. In the past, both legal theorists and courts have struggled to apply to "computer crimes," traditional criminal law doctrines used to prosecute theft, burglary, criminal mischief, forgery and other related crimes. The tangibility requirements in most theft laws, for example, have proven to be formidable obstacles to the prosecution of computer-theft when all that is taken is intangible information.[1] Similarly, prosecutors of computer crime have had difficulty convicting under traditional larceny statutes, which require a taking with an intent to deprive the owner of possession. With the advent of the Computer Fraud and Abuse Act of 1986, federal prosecutors now have a statute that criminalizes unauthorized access to a federal interest computer whether or not there is resulting damage or loss to the database.[2] Thus, the prosecution of computer crime is no longer dependent upon the application of doctrines developed prior to the computer age. But if the Computer Fraud and Abuse Act has put to

1. *See* Ottaviano, *Computer Crime*, 26 IDEA 163 (1986); McCall, *Computer Crime Statutes: Are They Bridging the Gap Between Law and Technology?*, 11 CRIM. JUST. J. 203 (1988); Becker, *The Trial of a Computer Crime*, 2 COMPUTER/L.J. 441 (1980).

2. The 1986 Federal Computer Fraud and Abuse Act, 18 U.S.C. § 1030 (1989). *See* Branscomb, *Rogue Computers and Computer Rogues: Tailoring the Punishment to Fit the Crime*, in ROGUE PROGRAMS 65-73 (L. Hoffman, ed. 1990) (for a review of existing and proposed state law).

rest the debate about how to prosecute computer abuse under traditional doctrines, it has also given rise to a chorus of public opposition. The enterprise of tracking down computer hackers and prosecuting them under new criminal statutes has not been well received by many computer users.

Section I of this Note briefly recounts the facts leading to the conviction of computer hacker Robert Tappan Morris in federal district court under the Computer Fraud and Abuse Act. This piece of legislation, and Morris's conviction for introducing a computer "worm" into a national scientific database, are among the most significant recent developments in criminal law in the area of technology abuse. The chief purpose of this section is to describe the reactions of legislators, computer designers and users, and members of the general public who have opposed Morris's trial and conviction. The public debate about whether computer hackers like Morris ought to be tried as criminals sets the stage for the theoretical discussion that follows.

Sections II and III of this Note consider two prominent and competing theories, retribution and utilitarianism, which might justify the punishment of computer hackers as criminals. The thesis of this Note is that both retributive and utilitarian arguments are useful in helping us to understand the conflict that seems to have arisen between two sets of social values: those we seek to protect by means of a criminal justice system and those associated with the basic principles of freedom from interference, freedom of information, freedom of expression and the like. Nonetheless, this Note argues that neither traditional retributive nor utilitarian theory provides a clear justification for the imposition of criminal punishment in the case of the "crime" that Morris committed when he introduced the Internet worm.

Proponents of retribution argue that, regardless of the effects of punishment, society is always justified in imposing criminal sanctions on those who violate the moral order. All retributive arguments in favor of punishment assume that we can define the moral order we seek to protect. The current debate over the appropriateness of Morris's conviction suggests that society is deeply divided as to the content of ethical behavior in the context of technological advancement. Retribution fails to justify the criminal punishment of computer hacking if we are unable to agree that such behavior is morally culpable.

Section III considers the case of Robert Morris in light of utilitarian theories of punishment such as deterrence and reformation. Utilitarianism fails to provide justification for the punishment of computer hackers due to our uncertainties about the relative costs and benefits to society of tighter restrictions on hacking. If we believe that punishment affects behavior (and if we believe that the greatest happiness for the greatest number ought to be the point of our legal system), are we cer-

tain what kinds of behavior we want to deter and what kind we want to encourage in order to arrive at utilitarian gain?

The final section of this Note considers the commonly held belief that, in its attempt to accommodate competing demands for order and freedom, criminal law is the most self-restrained of all bodies of legal doctrine. Our system of criminal justice assumes that criminal sanctions are imposed only as the measure of last resort, that is, only in the most pressing circumstances. Here, retributive and utilitarian theories merge to support a policy against the prosecution and conviction of computer hackers.

II. THE COMPUTER FRAUD AND ABUSE ACT AND THE INTERNET WORM

On January 2, 1990, Robert Tappan Morris became the first person convicted by a jury of a felony under the Computer Fraud and Abuse Act of 1986.[3] As alleged in his defense, Morris was conducting research on the subject of computer security as a graduate student at Cornell University when he was indicted. Morris admitted releasing a computer worm into Internet, a scientific network that connects an estimated 60,000 academic, corporate and nonclassified military computers nationwide. The Internet worm caused little permanent damage. Nevertheless, affected network subscribers—such as the University of California at Berkeley, NASA, and the U.S. Logistics Command at Wright Air Force Base—estimated the cost of the computer down-time and the labor necessary to diagnose and combat the worm to be between $5 million and $12 million.[4]

Morris testified at trial that the Internet worm was never intended to disrupt computer operations.[5] A programming error caused the worm to reproduce itself uncontrollably, jamming computers that it should have been able to enter harmlessly.[6] Morris's attorney described his client's intended action as a research project aimed at exposing the vulnerabilities of computer security systems. As evidence of Morris's

3. *See, e.g.*, *Student Guilty of Computer Break-In*, Wash. Post, Jan. 23, 1990, at A16, col. 1; Markoff, *From Hacker to Symbol*, N.Y. Times, Jan. 24, 1990, at A19, col. 1; Bone, *Jury Convicts Hacker Whose "Worm" Turned Nasty*, N.Y. Times, Jan. 24, 1990, at A1, col. 2; Markoff, *Computer Intruder is Put on Probation*, N.Y. Times, May 5, 1990, at A1, col. 1.

4. Markoff, *Student Testifies His Error Jammed Computer Network*, N.Y. Times, Jan. 19, 1990, at A19, col. 2.

5. *Id.*

6. As is noted in Branscomb, a worm can be inserted into a computer system without altering any existing files or the operating system. This is in contrast to a viral code, which always requires some alteration of the sequences in the computer memory in order to function. A worm, unlike a virus, need not cause any damage. Branscomb, *supra* note 2, at 66.

interest in computer security, Morris's lawyers introduced a videotape showing the defendant giving a lecture on the subject at the National Security Agency (NSA) several years earlier.[7] At the request of Morris's father, an NSA computer security expert, the NSA allegedly invited Morris to instruct agency officials on methods used by computer hackers to infiltrate protected databases. In the end, however, the videotape of Morris's NSA lecture appears to have been more useful to prosecutors than to Morris's defense. Prosecutors pointed to Morris's expertise as evidence of his disregard for the law and of his willingness to place a crucial information system at risk for the sake of a thrill.

In its indictment, the grand jury charged Morris with intentionally gaining access to a federal-interest computer without authorization,[8] preventing access to authorized users, and causing losses of more than $1,000. With Morris's conviction, government prosecutors claimed a victory for the public interest in uninterrupted access to crucial information systems.

In Congress, several bills aimed at amending laws used to fight computer crime were dropped upon receipt of the news that the Computer Fraud and Abuse Act—which does not mention computer worms or viruses—had been adequate to convict Morris.[9] Legislators who supported the movement to develop a federal statute were clearly relieved that the 1986 Act proved effective in the Morris case despite the fact that it was drafted prior to the innovation of the computer worm, and thus, without Morris's particular crime in mind.

If legislators who supported the Computer Fraud and Abuse Act were pleased with the guilty verdict in Morris's case, federal prosecutors were clearly disappointed when Morris was given probation and fined $10,000 rather than being sentenced to jail. Under the Act, Morris could have been sentenced to five years in federal prison and fined $250,000. However, the computer industry and the general public have

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7. Markoff, *Ex-Student Faces Trial Over Computer Chaos*, N.Y. Times, Jan. 7, 1990, at A18, col. 5.

8. The Computer Fraud and Abuse Act defines a "Federal interest computer" to mean a computer—

> (A) exclusively for the use of a financial institution or the United States Government, or, in the case of a computer not exclusively for use, used by or for a financial institution or the United States Government and the conduct constituting the offense affects the use of the financial institution's operation or the Government's operation of such computer; or
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> (B) which is one of two or more computers used in committing the offense, not all of which are located in the same State . . . .

18 U.S.C. § 1030(e)(2) (1989). The Act defines the term "exceeds authorized access" as meaning "to access a computer with authorization and to use such access to obtain or alter information in the computer that the accessor is not entitled so to obtain or alter. . . ." 18 U.S.C. § 1030(e)(6) (1989).

9. *E.g.*, H.R. 3524, 101st Cong., 1st Sess., 135 CONG. REC. 146 (1989).

shown little support for the federal government's interpretation of the Computer Fraud and Abuse Act as imposing criminal sanctions on computer hackers like Morris.[10] In an "electronic discussion" among computer experts organized by *Harper's Magazine*, one computer software designer and former hacker argued that Morris's prosecution constituted unjustifiable government intervention in a matter of private behavior. Computer hacking, the former hacker argued, is a right of passage in a computer age and an example of youthful over-indulgence that serves a social purpose.[11] Several of the industry's most prominent innovators (e.g., Mitch Kapor, designer of Lotus 1-2-3 and Steve Wozniak, co-founder of Apple Computer) have taken this argument a step further, alleging that hacking is essential to innovation and the development of new technology.[12] Other industry experts have expressed fears that the publicity generated by the prosecution of computer hacking will result in a massive effort to tighten computer security. This will result in an interference in the free flow of information.[13] Constitutional experts have wondered whether the *Morris* case raises issues of freedom of information and freedom of expression.[14]

Legal theorists have also questioned whether legal precedent exists for punishing an act more severely merely because it involves a computer. A tough new hacker measure recently proposed in England was met with the objection that gaining access to a database without authorization is most like a trespass, which ordinarily subjects the hacker to civil, rather than criminal, liability.[15] From the point of view of some commentators, the consequences of a breakdown in crucial information systems—such as those used by hospitals and the military—are so potentially devastating that Congress, in passing the Computer Fraud and Abuse Act, has simply determined that traditional categories of criminal law must be stretched. Of course, with only one jury conviction

10. It should be pointed out that some observors of the computer industry have speculated that we are not hearing as much from supporters of the criminalization of "computer abuse" as from the objectors because the supporters tend to be providers of computer services who remain silent in order to minimize public awareness of the vulnerability of their computer systems to such break-ins. *See* McCall, *supra* note 1, at 206; Branscomb, *supra* note 2, at 79; Chen, *Computer Crime and the Computer Fraud and Abuse Act of 1986*, 10 COMPUTER/L.J. 71, 82 (1990).

11. *Is Computer Hacking a Crime?*, HARPERS MAG., Mar. 1990, at 49. *See also* Hafner, *Morris Code*, NEW REPUBLIC, Feb. 19, 1990, at 15-16.

12. Schwartz, *Hackers of the World, Unite!*, NEWSWEEK, July 2, 1990, at 36-37.

13. *See* Lewyn, *Hackers: Is a Cure Worse Than the Disease?*, BUS. WEEK, Dec. 4, 1989, at 27.

14. *See* Barringer, *Free-Speech Issues at the Speed of Light: Electronic Bulletin Boards Need Editing. No They Don't.*, N.Y. Times, Mar. 11, 1990, A4, at col. 1; I. DEL SOLA POOL, TECHNOLOGIES OF FREEDOM (1983).

15. *Halting Hackers*, ECONOMIST, Oct. 18, 1989, at 18. *See* Wasik, *Law Reform Proposals on Computer Misuse*, 1989 CRIM. L. REV. 257, 259-60 (1989).

under the Act, we cannot know whether the courts are likely to comply with such a move. We do not know whether Robert Morris's conviction is likely to withstand an appeal or whether other jurisdictions will follow the district court in *Morris*. If we believe that the ultimate sources of the law are social needs and social values, then we may believe that the public controversy spawned by *Morris* is a good indication of the future of criminal law with respect to computer crime.[16] Why are creators and users of computer technology themselves so troubled by the idea of "computer crime?"

The remaining sections of this Note propose a theoretical context for the public debate over the criminalization of computer hacking. Ultimately, neither of the traditional arguments for criminal punishment—retribution and utilitarianism—provide a justification for criminal punishment of hackers. The retributive view is that punishment is justified only in response to a violation of the moral order; punishment is justified by the desert of the offender. But the current debate over the appropriateness of Morris's conviction reveals that those who favor and those who oppose the criminalization of computer hacking disagree on the ethical values at stake. Given our indecision as to the content of ethical behavior in the context of computer "abuse," retribution is unavailable as a justification for criminal punishment.

Alternatively, utilitarianism argues that we should punish only when the harm inflicted is outweighed by the good to society as a whole. The current debate over the *Morris* case reveals no clear indication of what the costs and benefits of criminal sanctions will be, nor is it clear how these factors might weigh in the balance. Given the inapplicability to the *Morris* case of the traditional arguments in favor of punishment, this Note argues that the public reaction against criminal sanctions for computer hackers, if not expressed in theoretical terms, is intuitively sound. The public reaction against Morris's conviction reflects the expectations of legal experts and non-experts alike that the decision to criminalize will be made with the greatest possible individual freedom in mind.

16. It may be of interest to the reader to know that the legislative history of the Computer Fraud and Abuse Act provides little insight into the social needs and values which are the driving forces behind the law. *See* Hollinger & Lanza-Kaduce, *The Process of Criminalization: The Case of Computer Crime Laws*, 26 CRIMINOLOGY 101 (1988). According to Hollinger and Lanza-Kaduce, the Act had no backers apart from a group of junior Congressmen who succeeded in gaining a limited amount of visibility for themselves by backing a non-controversial piece of legislation. Support for the law from the Justice Department and the controversy over its enactment have both come after the fact.

III. JUSTIFICATIONS FOR THE CRIMINALIZATION OF COMPUTER HACKING: RETRIBUTION

A. THE TRADITIONAL ARGUMENT IN FAVOR OF PUNISHMENT

The conflict of rights that lies behind the controversy over computer hacking is one example of the continuing challenge that technological innovation is sure to pose for traditional concepts of criminal law.[17] Does the problem of what to do about Robert Morris force us to reconsider the traditional classifications of criminal and non-criminal behavior? Did Robert Morris place a strain on the capacity of legal doctrine when he introduced the Internet worm?

Whatever their differences as to what constitutes a "crime," most legal theorists and practitioners seem to agree on one point: since the consequences of criminal liability are potentially severe, the law must act with a clear sense of purpose when it criminalizes behavior.[18] In recognition of this principle, criminal defendants are guaranteed certain basic constitutional protections, such as the right to counsel and the right to a jury trial.[19]

Most accounts of the fundamental purposes of criminal law begin by distinguishing criminal law from civil law. In a civil suit, the issue before the court is usually how much harm the plaintiff has suffered at the hands of the defendant and what remedies, if any, are appropriate to compensate the victim for her loss. The goal of civil litigation is compensation. By contrast, a criminal case requires the court to determine whether and to what extent the defendant has injured society. The result of a criminal conviction is a sentence designed to punish the defendant for her transgressions. Criminal law seeks to punish, or so the theory goes, because society recognizes that we cannot adequately re-

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17. For a fascinating and disturbing example, in the context of psychiatry, of the challenge that this tension between scientific "advancements" and harm-causing behavior can pose for the doctrines of criminal law; see the case of Dr. Martin, reviewed in J. GOLDSTEIN, A. DERSHOWITZ & R. SCHWARTZ, CRIMINAL LAW: THEORY AND PROCESS 3-31 (1974). A respected pediatrician with a well-documented track record of success with emotionally disturbed children was convicted under state law of indecent assault and risk of injury to the morals of children for homosexual acts allegedly committed in furtherance of his treatment.

18. For an attempt at "an integrated theory of criminal punishment," see, e.g., H. PACKER, THE LIMITS OF THE CRIMINAL SANCTION 65 (1968):

> Law, including the criminal law, must in a free society be judged ultimately on the basis of its success in promoting human autonomy and the capacity for individual human growth and development. The prevention of crime is an essential aspect of the environmental protection required if autonomy is to flourish. It is, however, a negative aspect and one which, pursued with single minded zeal, may end up creating an environment in which all are safe but none is free.

19. Kennedy v. Mendoza-Martinez, 372 U.S. 144 (1963).

spond to certain courses of action merely by rendering compensation to the victim.

Of course, once we agree that the fundamental purpose of a criminal justice system is to punish criminals, we are left with the problem of how to state the purposes of punishment. Legal experts have proposed a number of theories. The debate rages on, both in the literature and in the courts, as to which theory of punishment has served as the basis of the law *in fact*, and which theory *ought* to shape our decision to criminalize or not to criminalize.

Legal theories about the justification for punishment can be grouped into two main categories: retributionism and utilitarianism. Retribution is an ancient concept. Opponents of the theory have argued that it is an outmoded, even barbaric idea, inappropriate in an enlightened society.[20] Speaking for the United States Supreme Court in 1949, Justice Black announced that "[r]etribution is no longer the dominant objective of the criminal law."[21] More recently, however, the Supreme Court has said that retribution is neither "a forbidden objective nor one inconsistent with our respect for the dignity of men."[22] Whether they accept the idea of retribution as a justification for punishment, most theorists believe that it remains a significant factor in the allocation of criminal sanctions.

The distinguishing feature of retribution is that "it asks for no further justification of the right to punish than that the offender has committed a wrong."[23] The idea is that violators of the law (or, in a broader sense, those who offend morality) merit punishment whether or not punishment can be demonstrated to have any socially desirable effects upon criminals or upon others. The classic, modern statement of the concept of retributive justice is found in Kant, *The Philosophy of Law*:

> Juridical punishment can never be administered merely as a means of promoting another Good either with regard to the Criminal himself or to Civil Society, but must in all cases be imposed only because the indi-

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20. *See* A.C. EWING, THE MORALITY OF PUNISHMENT (1929); N. WALKER, PUNISHMENT, DANGER AND STIGMA: THE MORALITY OF CRIMINAL JUSTICE (1980). Retribution is perhaps even more commonly attacked on the grounds that as a form of retaliation, it is morally indefensible. *See* Wood, *Responsibility and Punishment*, 28 J. CRIM. L. & CRIMINOLOGY 630, 636 (1938).

21. Williams v. New York, 337 U.S. 241, 248 (1949).

22. Greg v. Georgia, 428 U.S. 153, 183 (1976). *See* Gardner, *The Renaissance of Retribution—An Examination of Doing Justice*, 1976 WIS. L. REV. 781 (1976). Gardner argues that retribution has had a resurgence of popularity. *See also* F. ALLEN, THE DECLINE OF THE REHABILITATIVE IDEAL (1981). Allen suggests that theorists have been willing to reconsider retribution as a justification for punishment due to a recent decline in public and professional confidence in the role of sociological and psychological factors in determining crime rates and effecting the rehabilitation of offenders.

23. P. BRETT, AN INQUIRY INTO CRIMINAL GUILT 51 (1963).

> vidual on whom it is inflicted *has committed a Crime* . . . The Penal Law is a Categorical Imperative; and woe to him who creeps through the serpent-windings of Utilitarianism to discover some advantage that may discharge him from the Justice of punishment, or even from the due measure of it, according to the Pharisaic maxim: "It is better that *one* man should die than that the whole people should perish." For if Justice and Righteousness perish, human life would no longer have any value in the world.[24]

Society avenges itself upon the criminal in order to even the moral score and to protect the moral (as opposed to the social) order. Proponents of retribution have also asserted that the availability of institutionalized revenge is necessary to prevent private retribution, but here the argument takes a utilitarian tack.[25]

Ordinarily, theories of retribution are accompanied by two limiting premises that describe the circumstances which justify punishment. First, retribution requires an exercise of free will. The criminal must have chosen to do wrong, otherwise no evil has been committed and no retribution is owed. Second, since retribution is unconcerned with social effects, it cannot justify an infliction of punishment disproportionate to the offense. Retribution demands that the severity of the punishment be proportionate to the gravity of the crime.[26]

B. THE CASE OF ROBERT MORRIS IN LIGHT OF THE RETRIBUTIONIST ARGUMENT IN FAVOR OF PUNISHMENT

Ordinarily, we reserve our moral arguments for debates about the punishment of more serious crimes such as murder or assault. Thus we might expect to find little opportunity for moral argument either in favor of, or in opposition to, the criminal conviction of Robert Morris for computer hacking. Nonetheless, the influence of a retributive notion of justice is apparent in the framing of the issues in the case, in Morris's theory of defense, in the judge's remarks during sentencing, and in the arguments of those who have reacted unfavorably to the federal government's decision to prosecute.

Clearly, the central point at issue in the case is whether Morris's actions lacked the component of intentional wrongdoing that is required before punishment can be justified on the basis of retribution. As noted

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24. E. KANT, THE PHILOSOPHY OF LAW 195-96 (W. Hastie trans. 1887). Useful examples of more contemporary statements of retributionism include Hart, *Social Solidarity and the Enforcement of Morality*, 35 U. CHI. L. REV. 1 (1967); W. MOBERLY, THE ETHICS OF PUNISHMENT (1968); Morris, *Persons and Punishment*, 52 MONIST 475 (1968); A. ROSS, ON GUILT, RESPONSIBILITY AND PUNISHMENT (1975); P. BEAN, PUNISHMENT 12-29 (1981).

25. For an example of an argument that mixes retributive and utilitarian premises in this way, see J. GIBBS, CRIME, PUNISHMENT AND DETERRENCE (1975).

26. A. VON HIRSCH, DOING JUSTICE 51, 66 (1976).

above, Morris's defense centered on the contention that he did not intend the program to damage the database or to halt the network.[27] As his attorneys argued, if Morris's actions were irresponsible, their results were unintended. The federal district court judge appeared to respond to Morris's lack of intent to do harm when he sentenced Morris to probation instead of prison, noting that the federal sentencing guidelines did not justify a stiffer sentence in the absence of fraud or deceit.[28] Judge Munson's efforts to suit the punishment to the crime also reveal the impact of the retributive idea of proportionality.

Given the obvious impact of Morris's lack-of-intent argument on his sentence, we might expect that retribution theory supplies us with terms in which to state a justification for the Computer Fraud and Abuse Act and its application to computer hackers. On the contrary, retribution apparently fails to provide a justification for the criminalization of conduct such as Morris's. This is because retribution requires that we define the moral order that Morris violated when he introduced the worm into Internet. According to the retributive view, crime deserves punishment equivalent in kind to the evil done. But in the case of the Internet worm, what was the evil done? If we accept the retributive premise, but cannot describe the moral order that was disturbed by Morris's actions, then there are no retributive arguments that will justify punishment.

As a theory of punishment, retribution actually exists in the literature in the form of two fundamentally different arguments about the sources of morality and the relation between legal and moral systems. One version of retribution assumes the existence of a transcendental moral order that subsumes all particular forms of social contact. In orthodox Judeo-Christian tradition, the transcendental law that requires retribution for crime is divine law.[29] By contrast, in Hegel's formulation of the idea of "natural law," men discover within themselves the source of moral authority.[30] Contemporary theorist Michael Moore describes a transcendental theory of retribution in *Law and Psychiatry*:

> Retributivism is quite distinct from a view that urges that punishment is justified because a majority of citizens feel that offenders should be punished. Rather, retributivism is a species of objectivism in ethics that asserts that there is such a thing as desert and that the presence of such a (real) moral quality in a person justifies punishment of that per-

27. Markoff, *supra* note 4.

28. *Id.*

29. *See* T. AQUINAS, ON LAW, MORALITY, AND POLITICS (W. Baumgarth & R. Regan eds. 1988). Hoekema reviews the contributions of Aquinas and of Judeo-Christian theology in general to philosophies of criminal punishment in Hoekema, *Punishment, the Criminal Law, and Christian Social Ethics*, 5 CRIM. JUST. ETHICS 31 (Summer/Fall 1986).

30. G. HEGEL, NATURAL LAW (T.M. Knox trans. 1802).

> son. What a populace may think or feel about vengeance on an offender is one thing; what treatment an offender deserves is another.[31]

In contrast to both the Judeo-Christian notion of God and Hegel's theory of rational morality, retribution theory has also taken the form of an argument against transcendentalism in favor of locating morality in cultural practice. Lord Devlin expresses this point of view in *The Enforcement of Morals*: "What makes a society of any sort is a community of ideas, not only political ideas but also ideas about the way its members should behave and govern their lives; these latter ideas are its morals."[32] Let us assume that we believe that the source of morality is in cultural practice. Is it possible to define a consensus as to what is and is not moral behavior in the context of technological innovation and information sharing? The current debate among lawmakers, courts, and computer users and designers over the propriety of the *Morris* case suggests that there is no consensus as to the content of ethical behavior in the context of computer use and abuse.

We might propose that the unauthorized access of a computer database is immoral because it violates the dignity of those who have labored and produced something of value over which they expect to exercise a certain amount of control. We might also argue that computer hacking is a moral affront to the right to privacy when a database contains personal information (such as a hospital's list of AIDS patients or a credit bureau's file of personal credit histories).[33] However, in the wake of Robert Morris's trial, computer industry experts and others have proposed an "alternative ethic" in defense of computer hacking. In its most extreme form, this "alternative ethic" attempts to turn the previous argument about dignity values on its head. According to the "alternative ethic," computer hacking is an expression of a fundamental human impulse. As one hacker describes, "[w]hen I reemerge into the

31. M. MOORE, LAW AND PSYCHIATRY 233 (1984).

32. P. DEVLIN, THE ENFORCEMENT OF MORALS 9-10 (1965).

33. A useful discussion of the problems that we face in any attempt to relate criminal justice back to a system of moral values can be found in H. PACKER, THE LIMITS OF THE CRIMINAL SANCTION 261-69 (1968). Compare also the majority and dissenting opinions in *Bowers v. Hardwick*, 478 U.S. 186 (1986). The majority in *Bowers* rejects the notion that the constitutionally protected right to privacy extends to homosexual sexual relations on the grounds that the due process clauses of the fifth and fourteenth amendments protect a right to engage only in conduct that is "deeply rooted in . . . history and tradition" or "implied in the concept of ordered liberty." Thus, the majority argues, the Court's prior decisions have protected the right to freedom from interference with respect to a limited set of social institutions, such as family and marriage. In contrast, the dissent in *Bowers* reads the right to privacy much more broadly to include such private, consensual sexual activity as the Georgia sodomy statute sought to outlaw. From the dissent's point of view, the fact that the moral judgments expressed in the Georgia statute may seem to some "natural and familiar" or more "deeply rooted" in society has no bearing on the constitutionality of the law.

light of another day with the design on paper—and with the knowledge that if it ever gets built, things will never be the same again—I know I've been where artists go."[34] Another defender of computer hacking argues that structures of control over the free flow of information are instances of immoral power relations:

> For all its natural sociopathy, the virus is not without philosophical potency . . . . [O]ne must consider [its] increasingly robust deterrent potential. . . . The virus could become the necessary instrument of our freedom. At the risk of sounding like some digital *posse comitatus*, I say: Fear the Government That Fears Your Computer.[35]

C. A RETRIBUTIVE ARGUMENT AGAINST THE CRIMINALIZATION OF COMPUTER HACKING

Though less eloquent than Kant, many of those who oppose the criminalization of computer hacking have expressed their opposition in terms that echo Kant's classic anti-utilitarian argument of punishment as a "principle of equality" rather than a means to an end. If we are unable to frame a retributive argument in favor of punishing Robert Morris, Kant may offer us an argument against expansion of the category of criminal behavior to include computer hacking. We can see why objections to Morris's prosecution and conviction are compelling once we frame them in retributive terms. The notion of retribution helps Kant explain how society's right to punish is a limited right: "Judicial Punishment can never be administered merely as a means for promoting another Good . . . ." This is so, says Kant, because when we punish for purposes other than retribution, we violate certain rights of equality and independent action:

> [O]ne man ought never to be dealt with merely as a means subservient to the purpose of another . . . . Against such treatment his Inborn Personality has a Right to protect him . . . . He must first be found guilty and *punishable*, before there can be any thought of drawing from his punishment any benefit for himself or his fellow-citizens.[36]

For Kant, retribution is the only justification for punishment because to punish otherwise involves the law in a conflict with the innate right to freedom from interference which belongs to every person.[37]

Kant's position is that no benefit accruing to either the criminal or society will justify punishment that is not otherwise needed to maintain the moral equilibrium. If we accept this premise, and if we cannot describe the moral order that Robert Morris violated when he introduced

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34. HARPERS MAG., *supra* note 11, at 47.

35. *Id.* at 50.

36. E. KANT, *supra* note 24, at 195. *See also* O.W. HOLMES, THE CRIMINAL LAW 42-43 (1923).

37. E. KANT, *supra* note 24, at 56.

the Internet worm, then we cannot use utilitarian grounds to justify the criminal sanctions levied against him. We are barred from arguing, for example, that vital information networks will be made vulnerable if we fail to punish computer hackers when we can catch them. According to Kant's retributive theory of punishment, we limit the instances in which punishment is justifiable to clear cases of moral transgression. Otherwise, we impose upon the inherent right of the individual to be free from such impositions in the absence of guilt.[38] When the law imposes punishment as a means to an otherwise legitimate societal goal, it violates "the one sole original, inborn right" to freedom from the compulsory will of another.[39]

Kant's argument against punishment in the absence of moral culpability presents problems when applied to the Morris case. One explanation for the current lack of consensus as to what constitutes ethical behavior in the context of technological innovation is simply the newness of the "crime" of computer hacking. Computer hacking is too new a social phenomenon for us to know whether, and to what extent, such behavior violates the ethical norm, or so the argument goes. But does this mean that there should be no crimes based on new technologies? By similar logic, we should then refrain from enacting laws designed to control behavior in the case of genetic engineering, or treatments for infertility, or euthanasia until the technology has been around long enough to inspire an ethical consensus.

A second line-drawing problem is presented by Morris's supporters when they propose an alternative ethic in defense of computer hacking based on the idea of freedom from interference for the hacker. Kant's argument against punishment without guilt is, in essence, an argument in favor of the dignity rights of the individual whose behavior violates no moral order, though it is undesirable for other reasons. We might

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38. Many more recent theorists have followed Kant's lead in arguing the importance of freedom to act. *See* A. VON HIRSCH, *supra* note 26, at 50:

> Our difficulty is, however, that we doubt the utilitarian premises: that the suffering of a few persons is made good by the benefits accruing to the many. A free society, we believe, should recognize that an individual's rights—or at least his most important rights—are prima facie entitled to priority over collective interests.

Of course, the idea that collective interests ought never to take priority over important individual rights is not an uncontroversial one. *See* United States v. Bergman, 416 F. Supp. 496, 499 (S.D.N.Y. 1976):

> Each of us is served by the enforcement of the law . . . . More broadly, we are driven regularly in our ultimate interests as members of the community to use ourselves and each other, in war and peace, for social ends. One who has transgressed against the criminal laws is certainly among the more fitting candidates for a role of this nature.

39. E. KANT, *supra* note 24, at 56.

make a similar argument, however, on behalf of the dignity rights of most criminals.

Clearly, the argument on behalf of dignity values for criminals is more sympathetic where the crime is a non-violent one. We intuit a difference in the severity of the offense between two instances of interference with the project of another: in one instance, I tear down the house that my neighbor constructs, in another I introduce a worm into a database with the result that authorized computer users are delayed or prevented access. Similarly, we intuit a difference between the killer who attacks with a knife and a pharmaceutical manufacturer that irresponsibly markets a product which turns out to have deadly side-effects for some users. Perhaps the difference is that there are no correlative social benefits at stake in the case of the knife attack, whereas most new drugs save lives or improve the quality of life. Perhaps we are less sympathetic to the dignity rights of those who commit violent crimes because we fear an increase in violence more than we fear an increase in computer hacking or securities fraud or copyright infringements. At any rate, even if we limit the argument about dignity rights for criminals to instances of non-violent crime, a formidable line-drawing problem remains. In which cases of non-violent but unlawful behavior should we value the dignity rights of violators over the rights of victims? Are copyright and patent laws infringing *unreasonably* on the dignity rights of those who would otherwise be free to benefit and to innovate in their own right?

IV. JUSTIFICATIONS FOR THE CRIMINALIZATION OF COMPUTER HACKING: UTILITY

A. THE TRADITIONAL ARGUMENT IN FAVOR OF PUNISHMENT

Utilitarian or instrumentalist theories of punishment such as deterrence, restraint, and reformation are far more important to the development of modern American jurisprudence than retribution. According to utilitarianism, punishment is only justified if the human costs of effecting change are outweighed by the benefits to society in minimizing criminal violations. There are areas of overlap between retributive and instrumentalist theories of punishment.[40] Similar to retributionism, utilitarianism is concerned with the inculcation of moral values and the satisfaction of society's need for revenge. The difference is that the retributivist believes that morality and revenge are ends in themselves, whereas the utilitarian holds that the inculcation of moral values is a means of controlling individual behavior with the net result that society is better off.

40. *Id.*

Likewise, utilitarianism will sanction revenge where the act of retribution results in more happiness to society—in having gotten its revenge—than in suffering to the criminal. Unlike retribution, utilitarian theories of punishment do not necessarily require an exercise of free will. Punishment serves its purpose even if the behavior which occasioned its use was in some sense predetermined or involuntary. Retribution demands that the punishment fit the crime. By contrast, theorists disagree as to whether utilitarianism places any limits on the use of punishment.[41] Some theorists have suggested that, pushed to the extreme, the logic of utilitarianism even appears to sanction punishment when no crime has been committed as long as the result is an increase in social utility.

Most utilitarian arguments on the value of punishment can be categorized as a theory of deterrence, restraint, or reformation. According to Jeremy Bentham, punishment serves the purpose of deterring socially undesirable behavior due to a "spirit of calculation" we all possess:

> Pain and pleasure are the great springs of human action. When a man perceives or supposes pain to be the consequence of an act, he is acted upon in such a manner as tends . . . to withdraw him . . . from the commission of that act. If the apparent magnitude, or rather value of that pain be greater than the apparent magnitude or value of the pleasure or good he expects to be the consequence of the act, he will be absolutely prevented from performing it.[42]

More recently, Johannes Andenaes has described the deterrent effect of punishment as follows:

> By means of the criminal law . . . "messages" are sent to members of a

41. In practical terms, it seems most likely that when judges pass sentence on criminal defendants their decisions are being influenced by a combination of retributive and utilitarian concerns. In *United States v. Barker*, the Ninth Circuit vacated the sentence imposed by the district court in a drug trafficking case on grounds that the lower court's pronouncement failed to reflect "an individualized assessment of a particular defendant's culpability." United States v. Barker, 771 F.2d 1362, 1368 (1985). The appeals court opinion stresses the importance of a balance between utilitarian concerns such as deterrence and the retributive principle of proportionality:

> In sentencing appellants to the maximum statutory term, the district court repeatedly alluded to the enormous societal harm it attributed to marijuana smuggling. . . . Implicit in the court's comments was the desire to stem the tide of marijuana smuggling through the deterrent effect maximum sentences would presumably have on others. . . .
>
> We do not find this desire to "send a message" through sentencing inappropriate per se. . . .
>
> Nevertheless, deterrence as a sentencing rationale is subject to limitation. . . .
>
> Central to our system of values and implicit in the requirement of individualized sentencing is the categorical imperative that no person may be used merely as an instrument of social policy.

Id. at 1367-68.

42. J. BENTHAM, PRINCIPLES OF PENAL LAW 396, 402 (Bowring ed. 1843).

> society. The criminal law lists those actions which are liable to prosecution, and it specifies the penalties involved. The decisions of the courts . . . underlin[e] the fact criminal laws are not mere empty threats. . . . To the extent that these stimuli restrain citizens from socially undesired actions which they might otherwise have committed, a general preventive effect is secured.[43]

Andenaes and other deterrence theorists distinguish between special deterrence, which seeks to control the behavior of a particular individual, and general deterrence, which seeks to influence decisions and attitudes among potential criminals in the general community. Andenaes argues further that the imposition of criminal sanctions results in general-preventive effects that extend beyond the conscious fear of punishment. In Andenaes's view, punishment also prevents crime by strengthening moral inhibitions: "The 'messages' sent by law . . . contain factual information about what would be risked by disobedience, but they also contain proclamations specifying that it is wrong to disobey."[44] Andenaes argues that the messages sent by criminal punishment tend to stimulate habitual law-abiding conduct. From the point of view of utility, Andenaes proposes that the achievement of moral inhibition and habit may be of greater value than fear of punishment. These effects even control behavior in cases where a person need not fear detection and sanction. They can apply whether or not the individual has knowledge of the legal prohibition.[45]

Deterrence is probably the most widely accepted rationale for punishment at the present time. However, it is not without its critics. Most of those who have attacked deterrence as a justification for punishment have questioned the empirical claim that criminals and would-be criminals are dissuaded from crime by their assessment of the risks of conviction and the unpleasantness of sanction. Both social scientists and legal theorists have questioned the ability of policy makers to make accurate judgments about the effects of punishment on behavior.[46]

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43. Andenaes, *The General Preventive Effects of Punishment*, 114 U. PA. L. REV. 949, 949-51 (1966). Other useful discussions of deterrence as a theory of punishment include F. ZIMRING & G. HAWKINS, DETERRENCE: THE LEGAL THREAT IN CRIME CONTROL (1974); Posner, *An Economic Theory of Criminal Law*, 85 COLUM. L. REV. 1193 (1985); Shavell, *Criminal Law and the Optional Use of Nonmonetary Sanctions as a Deterrent*, 85 COLUM. L. REV. 1232 (1985).

44. Andenaes, *supra* note 43, at 950.

45. *See also* F. ALEXANDER & H. STAUD, THE CRIMINAL, THE JUDGE, AND THE PUBLIC (1931) (on the subjects of punishment, habit, and moral inhibition).

46. For a look at the debate over the empirical evidence on deterrence, see, e.g., J. GIBBS, CRIME, PUNISHMENT AND DETERRENCE (1975); Peck, *The Deterrent Effect of Capital Punishment: Ehrlich and his Critics*, 85 YALE L.J. 359 (1976); Cook, *Punishment and Crime: A Critique of Current Findings Concerning the Preventive Effects of Punishment*, 41 LAW & CONTEMP. PROBS. 164 (1977); Decker & Kohfield, *Crimes, Crime Rates, Arrests, and Arrest Ratios: Implications for Deterrence Theory*, 23 CRIMINOLOGY 437 (1985). For a

High rates of recidivism have suggested to many that deterrence cannot justify punishment.

Although there is clearly a relationship between conduct and a desire to avoid pain, critics of deterrence theory note that it is simply not possible for the law to extricate the deterrence value of punishment from the myriad of other variables that are involved in individual decision-making. Clearly, neither the pain and stigmatization of imprisonment nor the threat of punishment will have the same effect on all individuals. How is the law to take such differences in individual response into account and retain its commitment to predictability and justice?

Whereas deterrence continues to be widely recognized, despite its critics, as a sound justification for punishment, judges and theorists only infrequently advocate criminal sanctions on the utilitarian grounds of incapacitation or reformation. Few of us would disagree with the proposition that some individuals pose such a danger to society and/or to themselves that they must be restrained. Thus, incapacitation is often the argument given on behalf of execution or life imprisonment without the possibility of parole for criminals believed to be beyond rehabilitation. Most crimes are not capital crimes, however, and most of those who are punished by imprisonment are eventually returned to society. Thus arguments against incapacitation as a justification for punishment are often directed towards restraint without rehabilitation, rather than against restraint per se. The idea is that unless restraint is either permanent or coupled with effective rehabilitation, imprisonment will only postpone criminal conduct.[47]

The theory that punishment is justified on the basis of rehabilitation "rests upon the belief that human behavior is the product of antecedent causes, that these causes can be identified, and that on this basis therapeutic measures can be employed to effect changes in the behavior of the person treated."[48] Most recently, the credibility of rehabilitation has suffered due to mounting evidence that prison reform programs

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more general critique of deterrence theory, see Seidman, *Soldiers, Martyrs, and Criminals: Utilitarian Theory and the Problem of Crime Control*, 94 YALE L.J. 315 (1984).

47. Recent writings on incapacitation as a justification for punishment are primarily concerned with distinguishing between crime control strategies that collectively incapacitate—imposing the same punishment on all persons convicted of the same offense—and more selective strategies that involve individualized sentences based on predictions that particular offenders are likely to commit further crimes if not incarcerated. Critics of the idea of selective incarceration have raised concerns of equity, discretion, and the dangers of arbitrary or invidious applications as evidence of the empirical difficulty of predicting the likelihood of future criminal behavior. *See* Cohen, *Selective Incapacitation: An Assessment*, 2 U. ILL. L. REV. 253 (1984).

48. W. LA FAVE & A. SCOTT, CRIMINAL LAW § 1.5, at 24 (1986).

have failed to rehabilitate criminals.[49] Just as critics of deterrence argue that there is no evidence that punishment works to deter crime, critics of rehabilitation question whether empirical evidence exists to support the idea that punishment is justified because criminals are reformed. Again, high rates of recidivism indicate that the instruments of criminal sanction—whether incarceration, fear, humiliation, probation, or psychiatric therapy—are failing to reform socially undesirable behavior. Other critics argue that even if rehabilitation were more successful, there are both utility and fairness reasons for allocating society's precious resources to a more deserving segment of the population.[50]

B. THE CASE OF ROBERT MORRIS IN LIGHT OF UTILITARIAN ARGUMENTS IN FAVOR OF PUNISHMENT

The public reaction to Robert Morris's trial and conviction has revealed a number of utilitarian arguments for and against the value of criminalization and punishment in the case of computer crime. Here again, however, the analysis appears to fail. Utilitarian analysis involves a weighing of costs and benefits. But such a comparison is only useful where all of the costs and benefits, or at least most of them, can be determined. Those who favor punishment are able to point to strong evidence of a benefit to society in the protection of computer networks and their authorized users. Alternatively, lawmakers and computer users who are uncomfortable with the idea of an expanded body of computer crime law have asserted that losses will accompany the gains when we act to deter or to reform computer hackers. Although their arguments seem compelling, the detractors of the Computer Fraud and Abuse Act have offered little evidence of social costs. Furthermore, it seems unlikely that such evidence can be produced. With no clear picture of the social costs of deterring hackers, we have no way of knowing if such costs will outweigh confirmed social benefits.

Those in favor of criminal sanctions against hackers make the very compelling argument that any punishment endured by a handful of hackers like Robert Morris is easily justified by the overall gain to society if crucial information systems are free of the kind of jam-up that resulted in the case of the Internet worm. In a society which is becoming increasingly dependent upon computer-generated information, even

49. *See* M. MARSDEN & T. ORSAGH, PRISON EFFECTIVENESS MEASUREMENT IN EVALUATING PERFORMANCE OF CRIMINAL JUSTICE AGENCIES 211 (Whitaker & Phillips eds. 1983) (for a survey of the sociological research).

50. Various aspects of the case against rehabilitation as a justification for punishment are raised in Cohen, *Moral Aspects of the Criminal Law*, 49 YALE L.J. 987, 1012-14 (1940); H.L.A. HART, PUNISHMENT AND RESPONSIBILITY 25 (1968); F. ALLEN, THE DECLINE OF THE REHABILITATIVE IDEAL—PENAL POLICY AND SOCIAL PSYCHIATRY 24 (1981); P. BEAN, *supra* note 24, at 194; M. MOORE, *supra* note 31, at 234-35.

temporary interference with a crucial network is potentially devastating. For example, a rogue program such as the Internet worm can shut down computer operations at a hospital resulting in patient deaths. Crucial government operations can be halted if a government system is infiltrated. Crucial communications of all sorts can be prevented when public communications networks—telephone, telex, facsimile—are brought down.

Those who have expressed fears about the social costs of criminal sanctions against hackers point to the impact of both tougher laws and tougher computer security measures on the free flow of information. As one commentator on *Morris* has noted, the Internet system was designed to allow government and university scientists to exchange information as freely as possible. "Restricting access to the network could create a perfectly secure system that no researcher would want to use."[51] In recognition of the problem, one week after the Internet worm made headlines, the Pentagon reportedly set the Computer Emergency Response Team (CERT) at Carnegie Mellon University's Software Engineering Institute to study ways of increasing computer security without shutting down access.[52]

The advent of computer crime laws has also raised concerns about the future of the constitutional right to freedom of expression. As de Sola Pool has pointed out, the first amendment doctrine of freedom of communication took shape in the context of print and other means of expression that were dominant when the Constitution was adopted. In subsequent years, technological factors have shaped progressively different legislative and judicial approaches to print and public speaking on the one hand, and electronic means of communication on the other. De Sola Pool fears that if society clamps down on computer networks, it may endanger what is destined to become the primary means of public expression:

> For five hundred years a struggle was fought, and in a few countries won, for the right of people to speak and print freely . . . . But new technologies of electronic communication may now relegate old and freed media . . . to a corner of the public forum. Electronic modes of communication that enjoy lesser rights are moving to center stage. The new communication technologies have not inherited all the legal immunities that were won for the old. . . . And so, as speech increasingly flows over those electronic media, the five-century growth of an unabridged right of citizens to speak without controls may be endangered.[53]

Opponents of criminal sanctions against hackers have also argued

51. Lewyn, *supra* note 13.

52. *Id.*

53. I. DEL SOLA POOL, *supra* note 14, at 1.

that hacking serves a crucial function in sharpening the instincts and skills of future generations of technological innovators. One United States Senator has recently asserted that "[w]e cannot unduly inhibit the inquisitive thirteen-year-old who, if left to experiment today, may tomorrow develop the telecommunications or computer technology to lead the United States into the 21st century. [The computer hacker] represents our future and our best hope to remain a technologically competitive nation."[54] But if it is true that today's computer hackers are tomorrow's innovators, how could such a hypothesis ever be demonstrated? Morris's supporters have also failed to address the contention that the skills allegedly acquired through hacking could be developed in some other, less disruptive, way. Furthermore, the argument about the importance of hacking to innovation presents us with another line-drawing problem. What about other forms of creative, though criminal conduct? Should we allow today's highly sophisticated crack cocaine trade to continue because its young operators might pave the way for innovations in business operations and management?

A further problem with utilitarian analysis is brought to light by the *Morris* case. Critics of the federal government's actions in filing charges against Morris have noted that Morris's infiltration of Internet was a poor test case for the new federal statute. If the Internet worm had not malfunctioned, no interference with the network would have resulted. Morris's worm would have occupied Internet computers undetected. It is far more common for the computer hacker to access a network without resulting damage and to exit without ever having been detected. This being the case, it is questionable whether any utilitarian grounds remain to justify criminalization. If we agree with John Stuart Mill, then there are no grounds for utilitarian argument if the hacker's presence remains unfelt:

> The sole end for which mankind is warranted, individually or collectively, in interfering with the liberty of action of any of their number is self-protection. That the only purpose for which power can be rightfully exercised over any member of a civilized community, against his will, is to prevent harm to others. . . . He cannot rightfully be compelled to do or forbear because it will be better for him to do so, because it will make him happier, because, in the opinion of others, to do so would be wise, or even right. These are good reasons for remonstrating with him, or reasoning with him or persuading him, or entreating him but not for compelling him, or visiting him with any evil in case he do otherwise. To justify that, the conduct from which it is desired to deter him must be calculated to produce evil to someone else.[55]

54. Schwartz, *supra* note 12, at 36.

55. J.S. MILL, UTILITARIANISM (1863).

Mill's argument—that punishment is only justified when designed to prevent harm to others—should make us aware that any utilitarian argument against the criminalization of computer hacking must be limited to a fairly narrow category of behavior: the introduction of a computer worm might be included whereas the introduction of a virus—a program that typically destroys or scrambles data—would not. Innocuous forms of computer "prowling" would not justify punishment, though we might be justified in sentencing the unauthorized use of information gathered in that fashion. Clearly, if Morris's worm had interfered with a hospital database with the result of patient deaths, we would be talking about a criminal act. Furthermore, such an act would not require a computer crime statute to provide grounds for prosecution.

V. THE LIMITS OF THE CRIMINAL LAW

> The prevention of crime is the primary purpose of the criminal law; but that purpose, like any social purpose, does not exist in a vacuum. It has to be qualified by other social purposes, prominent among which are the enhancement of freedom and the doing of justice. The effectuation of those purposes requires placing limits on the goal of crime prevention.[56]

In *The Limits of the Criminal Sanction*, Packer describes the "distinctive content" of the criminal law as a cluster of doctrines that seek to limit its application, thus accommodating competing social needs for order and freedom.[57] The criminal law favors freedom from sanction in all cases in which the statute does not unambiguously state the particular forms of behavior that will be subject to sanction. Similarly, the courts have frequently demonstrated their reluctance to impose punishment where the policy of the law is unclear. Packer cites a number of such "limiting" doctrines, among them, the void-for-vagueness doctrine, the rule of strict construction of penal statutes, and such fundamental requirements of proof as actus reus and mens rea.

As Packer says, "under the vagueness doctrine . . . the court says to the legislature: you have given so much discretion in picking and choosing among the various kinds of conduct to which this statute may be applied that we will not let it be applied at all."[58] We believe that justice requires clear notice to the individual whose behavior may subject him to criminal sanction. We believe that a clear statement of the law will also serve to prevent arbitrary and invidious enforcement. In Packer's account, the court sends the following message to the legislature when

56. H. PACKER, *supra* note 18, at 16.
57. *Id.* at 71.
58. *Id.* at 93-94.

it invokes the rule of strict construction of penal statutes: "the language you have used in this criminal statute does not convey a clear intention to cover the case before us. Therefore this man, who may well have done something that all of us would like to treat as criminal, must go free."[59]

In Packer's view the doctrines of mens rea and actus reus show the same bias towards self-limitation:

> Although it seeks to control the future by shaping the ways in which people behave and by intervening in the lives of people who display antisocial propensities, the criminal law limits its effect and its intervention to the *locus poenitentiae* of what has in fact observably taken place in the past.[60]

As Packer believes, "this self-denying ordinance is what makes the criminal law tolerable as a means of social control in a free and open society."[61]

VI. CONCLUSION

Let us assume the accuracy of Packer's portrayal of the criminal law as distinctively self-limiting. Both retributive and utilitarian arguments exist to guide the development of the law of computer crime towards conformity with this idea of a limited applicability of the criminal sanction. This Note describes Kant's anti-utilitarian insistence that we adhere to a "principle of equality" in imposing criminal punishment: no punishment without guilt, no guilt where an individual's actions have left the moral order intact, even if the actions are undesirable for other reasons. Arguably, the idea of a moral order as Kant conceived it—one that requires punishment in certain circumstances and demands that the independence of individual action be preserved in others—has not survived from Kant's time to ours. Nevertheless, contemporary criminal law doctrine is permeated by limiting ideas such as mens rea and actus reus that owe much to a long tradition of retributive argument. The point is that if we are unable to define in clear terms our sense of the particular culpability of Robert Morris and other computer hackers, then a law that would allow him to be punished as a criminal exists as an anomaly within the criminal law system as a whole.

The criminal prosecution of Robert Morris is inconsistent with the distinctively self-limiting character of the criminal law in the absence of a clear theory of culpability. If this is true, there are a number of utilitarian arguments to be made against the criminalization of computer hacking. The law only possesses authority and legitimacy in our society

59. *Id.* at 95.
60. *Id.* at 96.
61. *Id.*

if it is perceived to be authoritative and legitimate. Courts submit to the controlling authority of legal precedent in order to preserve the characteristics of predictability and justice that endow the law with legitimacy in the eyes of those who agree to be bound by its strictures.

If the Department of Justice's application of the Computer Fraud and Abuse Act to Robert Morris is out of step with recognized principles of the law, then it should be no surprise that the case continues to generate so much controversy. If the application of the law violates recognized principles, such as the principle of limited applicability of the criminal sanction, the result may be the opposite of criminal deterrence. Where the law has lost the appearance of legitimacy, those who are called upon to behave or to refrain from behaving in a particular way are less likely to comply.

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