OVERCOMING THE MYTH OF FREE WILL IN CRIMINAL LAW: THE TRUE IMPACT OF THE GENETIC REVOLUTION

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INTRODUCTION

Understanding the roots of current theoretical justifications for criminal punishment is crucial in evaluating its susceptibility to future change. In the American criminal justice system, the dominant justification for punishing individuals is that offenders have made a voluntary choice to break the law, thus validating the imposition of a societal sanction. However, recent discoveries in the field of genetics have called this theoretical assumption of individual, voluntary choice into question. Because genetic influences on behavioral traits may raise doubts about the nature of individual free will, some scientists have concluded that various members of society may be less able to refrain from breaking the law than others. Consequently, several commentators have suggested that this genetic research may shake the theoretical foundations of the criminal justice system to its core, and that a radical reorganization of the system is inevitable. Other commentators have predicted that the changes will be more subtle, perhaps manifesting themselves only in the context of specific criminal adjudications.

The American criminal justice system, however, is more resilient and entrenched than either category of commentators suggests. Thus, even though genetics research indicates that society should reexamine some of its philosophical assumptions about the criminal justice system and institute major systematic changes, nevertheless the American criminal justice system will likely not be dramatically altered. Instead, the resulting change will be a system that simply relies more on utilitarian rationales to justify criminal punishment than it has in the

past.[1] This Note proceeds in several parts. Part I briefly summarizes the relevant philosophical background of the American criminal justice system and its view of human behavior. Part II reviews current genetic research and its impact on the parameters of this debate. Part III explains how various commentators have viewed the ramifications of genetic research in the criminal justice context, and Part IV offers a brief critique of their analyses. Finally, Part V argues that punishment justifications will become increasingly utilitarian.

I. PHILOSOPHICAL FOUNDATIONS OF CRIMINAL LAW

Crime is a socially constructed concept that can loosely be defined as taking a particular action with a designated mental state, the combination of which society has deemed punishable.[2] Societies, through their legislatures, decide which behaviors will be tolerated and which will be prohibited. The latter are designated as crimes.[3] Once an individual has chosen to commit a crime, and thus deviated from proscribed societal norms, society mandates appropriate punishment. The imposition of a criminal sanction represents society's disapproval of the criminal's disregard of the community's values. It is thus the "strongest formal condemnation that society can inflict on wrongdoers."[4]

Justifications for these sanctions—which may include taking an individual's liberty or life—go to the very heart of criminal justice theory. In spite of this fact, courts and legislatures have treated the theory of criminal punishment as a peripheral concern. It is "as if we were clear about when it is correct to punish even if we cannot sort out exactly why it is correct."[5] However, any evaluation of the cor-

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1. I am not, of course, the first to suggest that a utilitarian justification for punishment is the likely result of the "genetic revolution." Maureen Coffey, for example, suggests that utilitarianism is the most justified system in light of discoveries showing the role that genetics plays on human behavior. Maureen Coffey, Note, *The Genetic Defense: Excuse or Explanation?*, 35 WM. & MARY L. REV. 353, 394–98 (1993). My Note differs from Coffey's note, however, because she sees utilitarian justification as being one of many changes that will likely occur, including the use of genetic makeup as a mitigating factor in sentencing. *Id*. I see the likely ramifications of the genetic revolution as much more limited and subtle, and manifesting themselves *only* on a philosophical basis, *not* in daily courtroom behavior.

2. Sanford H. Kadish, *Excusing Crime*, 75 CAL. L. REV. 257, 258 (1987).

3. *See* Coffey, *supra* note 1, at 356–57 (explaining the process by which society turns unpopular behavior into criminal activity).

4. GEORGE MOUSOURAKIS, CRIMINAL RESPONSIBILITY AND PARTIAL EXCUSES 34 (1998).

5. Lloyd L. Weinreb, *Desert, Punishment, and Criminal Responsibility*, 49 LAW & CONTEMP. PROBS. 47, 50–51 (Summer 1986).

rectness of this punishment must include an understanding of society's assumptions about human behavior. The American criminal justice system largely relies on the notion that individuals are responsible for their actions, and, thus, can be punished when they choose to violate societal standards. In other words, American criminal jurisprudence is firmly rooted in the concept of individual free will.[6]

A. Competing Philosophical Frameworks

The debate as to the ultimate causes of human action has been at the core of Western philosophy for centuries.[7] Most of this debate centers upon what constitutes freedom of action, and whether an individual has the capacity to choose between alternatives.[8] Although there are numerous derivatives of these approaches, they can generally be divided into two overarching theories of human behavior: free will and determinism.[9]

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6. Both courts and commentators have acknowledged the role of free will in American criminal justice. *See* People v. Wolff, 394 P.2d 959, 971 (Cal. 1964) (affirming that "the basic behavioral concept of our social order is free will") (citations omitted); Richard C. Boldt, *The Construction of Responsibility in the Criminal Law*, 140 U. PA. L. REV. 2245, 2247 (1992) (contending that the criminal law creates and maintains a society based on the notion of free will); Jonathan Glover, *The Implications for Responsibility of Possible Genetic Factors in the Explanation of Violence*, *in* GENETICS OF CRIMINAL AND ANTISOCIAL BEHAVIOR 237, 238 (1996) (asserting that the "theoretical possibility of the truth of determinism should make us rather more worried than we are"); Stephen J. Morse, *Culpability and Control*, 142 U. PA. L. REV. 1587, 1589 (1994) (asserting that "the criminal law presupposes precisely the folk psychological account of human action based on desires, beliefs, intentions, and other mental states that reductionist theories reject"); Ronald Rychlak & Joseph Rychlak, *Mental Health Experts on Trial: Free Will and Determinism in the Courtroom*, 100 W. VA. L. REV. 193, 196 (1997) (noting that the "legal system's assumption of free will in human affairs is ubiquitous"). *See generally* John L. Hill, Note, *Freedom, Determinism, and the Externalization of Responsibility in the Law: A Philosophical Analysis*, 76 GEO. L.J. 2045 (1988) (considering the conflict between free will and determinism, and arguing that, if determinism is correct, it is philosophically incoherent to hold persons responsible for unavoidable acts).

7. Boldt, *supra* note 6, at 2254. The universality of this debate is striking as thinkers ranging from Plato to Martin Luther to Jeremy Bentham to Immanuel Kant have all attempted to understand the perplexities of human behavior and the process by which an individual undertakes an action. *Id*.

8. Another way to phrase this conception of freedom is the ability of the individual to do otherwise. *Id*.

9. *Id*. The debate between free will and determinism is one that includes many intricacies and subclasses that are beyond the scope of this Note. It is simplistic to argue that this area of rich and intricate human thought can be so crudely divided into two categories. Nevertheless, the philosophical camps of free will and determinism are generally accepted because they do highlight what is the line of division for most philosophers: whether humans control their actions. For a thorough elaboration of the intricacies of the debate, see generally FREE WILL AND DETERMINISM (Bernard Berofsky ed., 1966).

Free will theory contends that human behavior, when faced with a given situation, is the result of individual choices made by autonomous actors.[10] The theory assumes that individuals are unique actors—they have an inherent ability to choose or "choose not" when confronted with specific environmental stimuli.[11] It thus follows that, with this choice, individuals can be held personally responsible for their choices, and thus should face the consequences for their decisions.[12]

In contrast, determinist theory sees human behavior quite differently. Determinists contend that individual action is to some degree "caused" by factors outside of an individual's control.[13] These causal forces might range from divine intervention to interactions between social and biological factors. But, whatever they are, they compel human behavior to some extent.[14] Adherents to determinism vary from "hard determinists," who argue that all events are caused by outside forces or independent biological, social, or psychological factors,[15] to "soft determinists," who concede that human behavior is largely predictable, but assert that individuals still can exercise some degree of choice in their actions.[16] However each of these types of determinists share the common belief that individual behavior cannot be separated from outside, causal forces.

B. The Legal Choice to Assume Free Will

American legal jurisprudence has dealt very superficially with these complex questions concerning the causes of human behavior. Courts have shown little indication that they are willing to undertake the difficult philosophical, biological, and psychological inquiry necessary to truly formulate an understanding regarding the causes of human behavior.[17] While the policy goals for punishment may be con-

10. "Traditionally, an actor has been said to have acted freely (according to his or her free will) if, with respect to a given act, he or she could have done otherwise." Boldt, *supra* note 6, at 2254 n.24 (citing John M. Fischer, *Introduction: Responsibility and Freedom*, *in* MORAL RESPONSIBILITY 9, 41 (John M. Fischer ed., 1986)).

11. *Id.* at 2254.

12. Hill, *supra* note 6, at 2045.

13. Boldt, *supra* note 6, at 2255.

14. *See id.* at 2255–58 (illustrating the factors that can influence an individual's actions).

15. *See* Glover, *supra* note 6, at 239–42 (identifying the implications of the hard-determinist viewpoint).

16. *See id.* (explaining the soft-determinist viewpoint).

17. When one reviews the cases in which courts attempt to create excuses or other exceptions to punishment, the result is striking. Courts tend to substantively debate the actual defense being asserted (e.g., insanity, duress, alcoholism) but skip the initial analysis as to why these ex-

tinuously debated,[18] it is nevertheless clear that even absent this inquiry, the American legal system has shown a preference for free will as the basis for its underlying philosophy.[19] The Supreme Court acknowledged this, saying that a "belief in freedom of the human will and a consequent ability and duty of the normal individual to choose between good and evil [is a belief that is] universal and persistent in mature systems of law."[20] However, this legal preference is not based in scientific precision about human behavior. It simply provides the easiest and most convenient basis for constructing a base set of legal principles.[21] Professor Herbert Packer articulates this systemic choice in this way:

> The idea of free will in relation to conduct is not, in the legal system, a statement of fact, but rather a value preference having very little to do with the metaphysics of determinism or free will . . . . Very simply, the law treats man's conduct as autonomous and willed, not because it is, but because it is desirable to proceed as if it were.[22]

While most areas of law carry free will as a base assumption,[23] criminal law relies on it to an even greater degree because it provides a philosophical basis for individual punishment. As in a Kantian legal world, individuals should only have their liberty infringed if they have undertaken an action that is based on choice and thus deserving of punishment.[24]

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cuses are different from normal modes of behavior. *See, e.g.*, United States v. Aguilar, 883 F.2d 662, 693 (9th Cir. 1989), *cert. denied,* 498 U.S. 1046 (1991) (setting forth the criteria for a successful necessity defense); Powell v. Texas, 392 U.S. 514, 548 (1968) (holding that alcoholism does not constitute a viable excuse to criminal action); United States v. Contento-Pachon, 723 F.2d 691, 692–93 (9th Cir. 1984) (finding a duress justification where an individual fled Columbia with cocaine to avoid execution). One plausible explanation for this phenomenon is that courts routinely assume that free will exists. *But see* United States v. Moore, 486 F.2d 1139, 1150–53 (D.C. Cir. 1973) (setting forth an extensive analysis of the effect an individual's lack of free will may play upon criminal liability). For a more thorough analysis of this case, see *infra* notes 92–97 and accompanying text.

18. The four general policy goals most often identified are deterrence, retribution, rehabilitation, and incapacitation. LAWRENCE TAYLOR, BORN TO CRIME 10–15 (1988).

19. *See supra* note 6 and accompanying text.

20. Morissette v. United States, 342 U.S. 246, 250 (1952).

21. *See* Richard Lowell Nygaard, *Free Will, Determinism, Penology and the Human Genome: Where's a New Leibniz When We Really Need Him?*, 3 U. CHI. L. SCH. ROUNDTABLE 417, 421–22 (1996) (asserting that a criminal law system completely based on free will flies in the face of common sense, yet perseveres).

22. HERBERT PACKER, THE LIMITS OF THE CRIMINAL SANCTION 74–75 (1968).

23. *See* Rychlak & Rychlak, *supra* note 6, at 196 (citing wills, deeds, contracts, and confessions as examples).

24. *See* MOUSOURAKIS, *supra* note 4, at 37 (discussing the criminal law's refusal to punish people for their bad characters outside the context of an action); Paul Robinson & John M.

Additionally, because criminal law liability hinges on *mens rea*, some courts and commentators assert that in our current criminal justice system "free will is an essential prerequisite to criminal liability."[25] Nevertheless, courts almost never articulate a scientific or even a metaphysical basis for this belief system. Rather, it is one based in practicality and social order.[26] Professors Franz Alexander and Hugo Staub illustrate this point:

> [W]e may for practical purposes hold the individual responsible for his acts; that is to say, we assume an attitude as if the conscious Ego actually possessed the power to do what it wishes. Such an attitude has no theoretical foundation, but it has a practical, or still better, a tactical justification.[27]

The free will assumption allows for easy administration of justice and solves any tension that might exist between deterministic science and normative criminal justice theory. It allows criminal jurisprudence to be foundationally constructed around the notion of human decisionmaking control and corresponding personalized responsibil-

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Darley, *The Utility of Desert*, 91 NW. U. L. REV. 453, 455 (1997) (articulating the Kantian view that punishment should follow only from a "just desert" rationale). Professor Meir Dan-Cohen argues:

> The core of criminal law doctrine, centered around the concept of mens rea and the variety of criminal excuses, probably comes closer than any other set of social practices to an instantiation of the Kantian conception of the responsible human subject as the noumenal self, characterized exclusively by a rational free will unencumbered by character, temperament, and circumstance.

Meir Dan-Cohen, *Responsibility and the Boundaries of the Self*, 105 HARV. L. REV. 959, 1003 (1992).

25. Rychlak & Rychlak, *supra* note 6, at 198 (quoting 1 PAUL H. ROBINSON, CRIMINAL LAW DEFENSES § 25(a), at 91 n.2 (1984)). The Supreme Court expressed this belief favoring free will as recently as 1977, stating that "[m]en usually intend to do what they do." Brewer v. Williams, 430 U.S. 387, 434 (1977).

26. Scholars express this view by asserting that the American criminal justice system is based upon an "as if" theory. Michael S. Moore, *Causation and Excuses*, 73 CAL. L. REV. 1091, 1121 (1985). This approach accepts the view that most human behavior is determined by outside causal factors, but prefers to treat human action "as if" there is complete freedom. *Id*. Philosopher Jerome Hall articulates this view:

> [Psychiatry] purports to be rigorously scientific and therefore takes a determinist position. Its view of human nature is expressed in terms of drives and dispositions which, like mechanical forces, operate in accordance with universal laws of causation.
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> On the other hand, criminal law . . . is not a theoretical science whose sole concern is to understand and describe what goes on. It is, instead, a practical, normative science which, while it draws upon the empirical sciences, is also concerned to pass judgment on human conduct.

Id. at 1121–22 (quoting JEROME HALL, GENERAL PRINCIPLES OF CRIMINAL LAW 455 (2d ed. 1960)).

27. FRANZ ALEXANDER & HUGO STAUB, THE CRIMINAL, THE JUDGE, AND THE PUBLIC: A PSYCHOLOGICAL ANALYSIS 72–73 (1931).

ity. Not only does this allow courts to avoid the difficult task of deciphering the true root of all human behaviors, it also justifies another key component of criminal justice theory: attributing blame to individuals.

The concept of blame allows society to rationalize its infliction of punishment on a criminal wrongdoer. Whenever society decides to punish a criminal, the goal (either primarily or secondarily) is to inflict pain and suffering on the individual.[28] Such punishment can only be levied under circumstances when the individual truly deserves it. Society would consider it wrong to inflict pain and suffering on a blameless individual. By assuming that individuals possess free will when they go against the legal norms and standards of society, the necessary level of culpability and blameworthiness is met.[29]

C. The Free Will Assumption As Applied

Assumptions about free will can be made at two distinct times in the prosecution of a suspected offense: at trial and at sentencing. To convict a defendant, the general rule is that the criminal act charged must have been committed voluntarily.[30] If the defendant acted involuntarily, the defendant cannot be said to have exercised free will. Thus, in some cases, the courts may hold that the defendant has a valid affirmative defense of excuse.[31] Even if the defendant is convicted, however, free will may still be an issue at the sentencing stage.

When imposing punishment, the traditional justifications have been deterrence, rehabilitation, retribution, and incapacitation.[32] These justifications are a combination of free will assumptions and utilitarian rationales, as becomes evident when each justification is examined in greater detail. For the sake of convenience, the four jus-

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28. WESLEY CRAGG, THE PRACTICE OF PUNISHMENT: TOWARDS A THEORY OF RESTORATIVE JUSTICE 30 (1992). It is not necessarily the case that the goal is the literal infliction of pain, but virtually all would agree that suffering is a secondary effect of incarceration.

29. Professor Henry M. Hart recognizes the role of blame in the American criminal law by avowing that crime "is conduct which, if duly shown to have taken place, will incur a formal and solemn pronouncement of the moral condemnation of the community." Joel Feinberg, *The Expressive Function of Punishment*, *in* 4 PHILOSOPHY OF LAW: CRIMES AND PUNISHMENTS 87, 91 (Jules L. Coleman ed., 1994) (quoting Henry M. Hart, *The Aims of the Criminal Law*, 23 LAW & CONTEMP. PROBS. 401, 405 (Summer 1958)).

30. WAYNE R. LAFAVE, CRIMINAL LAW § 3.2(c) (3d ed. 2000).

31. *See supra* note 17 and accompanying text.

32. Albert W. Alschuler, *The Changing Purposes of Criminal Punishment: A Retrospective on the Past Century and Some Thoughts on the Next*, 70 U. CHI. L. REV. 1, 1 (2003) (characterizing these four justifications as "textbook purposes of criminal punishment").

tifications are considered according to the degree to which each relies on free will assumptions.

Of the four justifications, rehabilitation arguably relies on the free will assumption the most. If a defendant is incapable of determining the course of her own actions, punishing her is not going to transform her into an individual who avoids committing crimes.

Next on the free will continuum are deterrence and retribution. Deterrence represents the belief that the goal of punishment is the prevention of future crime, and can either be accomplished via the individual (specific deterrence) or society as a whole (general deterrence).[33] Specific deterrence presupposes that the defendant can exercise free will because otherwise the punishment would not teach the criminal to avoid that act in the future.[34] General deterrence, however, does not presuppose that the individual defendant can exercise free will, but it does arguably assume general free will.[35] So long as some members of society possess free will, those members can learn from the defendant's punishment to modify and control their own conduct. Thus, it still might make sense for utilitarian reasons to confine someone that does not possess free will because doing so would send a message to those individuals who do.

Like deterrence, retribution can be understood in two different ways. Some would say that the proper definition of retribution is "an eye for an eye."[36] Adherents to this definition might see the question of whether free will existed as a non-issue: someone who causes harm to another should be made to suffer herself.[37] Others would argue that retribution is properly understood as desert, and desert "depends as much or more on circumstances and personal characteristics as upon physical actions and harm."[38] Proponents of the latter view would have a hard time imposing punishment for circumstances beyond the defendant's control because there would be no sense of reciprocity.[39]

Last but not least, incapacitation also provides a justification for

33. Toni Massaro, *Shame, Culture and American Law*, 89 MICH. L. REV. 1880, 1895–96 (1991).

34. *See id.* at 1896 (discussing the relationship between personality and deterrence).

35. *See* Michele Cotton, 37 AM. CRIM. L. REV. 1313, 1316 (2000) (noting that fear of punishment is what allows criminal justice to have a deterrent effect).

36. Alschuler, *supra* note 32, at 19.

37. *See id.* (noting that some people perceive the object of retribution as "match[ing] punishment to harm").

38. *Id*.

39. *See id.* (stating that the "eye for an eye" formula is "horrifying precisely because it does not adequately take account of an offender's culpability").

imposing punishment. Incapacitation, however, does not require the court to make any assumptions about free will. A court may simply conclude that it is in society's best interests to remove a particular individual from society. When this happens, the rationale for imposing punishment is then purely utilitarian.

In short, when imposing punishment, courts are often required to make assumptions about free will, but there can be a utilitarian component to their decisions as well.

II. THE EFFECT OF GENETICS ON THE CRIMINAL LAW

Because free will is often a cornerstone of current criminal justice theory, any alteration of this concept could have major ramifications. Recent findings that individuals with certain genetic codes may be more likely to commit violent crime become extremely important. To be sure, they call into question the role that free, individual choice plays in the commission of crime.[40] It is important to understand the results of these studies and how they correlate to theories of free will and determinism.

A. Genetic Research Summarized

In the late 1960s, scientific research began to take place that illustrated a possible connection between various genetic factors and propensity for violent behavior in individuals.[41] Studies found that, even controlling for other factors, a disproportionate number of males with the XYY chromosome were being held in maximum security prisons, facilities reserved for the most violent of criminals.[42] Although a general connection was found, inconsistency in future studies,[43] coupled with a general reluctance to accept these "genetic excuses," meant

40. The popularity of these studies also illustrates their importance. One study conducted by the *New York Times*, the *Washington Post*, and the *Los Angeles Times* between 1984 and 1987 found that over four hundred articles were written in these newspapers relating genetic makeup to human behavioral traits. Rochelle Cooper Dreyfuss & Dorothy Nelkin, *The Jurisprudence of Genetics*, 45 VAND. L. REV. 313, 320 n.50 (1992) (citing Dorothy Nelkin, Hereditarian Themes in Popular Culture (1991) (unpublished proposal to the National Institutes of Health)). This study suggests that even when understanding was at a very primitive level, the news value of such results was considered to be very significant. *Id*.

41. Herman A. Witkin et al., *Criminality in XYY and XXY Men*, 193 SCIENCE 547, 547–55 (1976).

42. *Id*.

43. A larger study found a disproportionate number of individuals with the XYY chromosome in criminal institutions, but found no evidence that there was any link between the chromosome and violent behavior. *Id.* at 553–54.

that courts rejected the XYY chromosome defense in criminal trials.[44] Nevertheless, the study raised important questions about the role of genetics in criminal behavior.

The next significant genetic research with implications for criminal law was Professor Han G. Brunner's study of so-called "aggression" genes. Professor Brunner studied a large Dutch family that had a significant number of men who were abnormally aggressive in their behavior.[45] The family was chosen because it exhibited "a sharp, unexplainable behavioral contrast between affected and unaffected males."[46] After controlling for a variety of different factors, Professor Brunner discovered that the males who exhibited impulsive, aggressive behavior such as rape, arson, and assault also had a mutation in one of their genes.[47] The male relatives carried a mutated aggressive gene for monoamine oxidase (MAOA), an enzyme responsible for metabolizing certain neurotransmitters. As a result, they had difficulty coping with stressful situations.[48] Scientists hailed Brunner's work as extremely important, possibly laying the groundwork for the discovery of the gene for "aggression."[49] Although the long-term implications of this research are unclear,[50] Professor Brunner's study is important because it asserts that, not only is there a correlative effect

44. This defense was brought in a number of jurisdictions. *See, e.g.*, People v. Yukl, 372 N.Y.S.2d 313, 319 (N.Y. Sup. Ct. 1975) (rejecting a motion for the appointment of a genetic expert because "in New York an insanity defense based on chromosome abnormality should be possible only if one establishes with a high degree of medical certainty an etiological relationship between the defendant's mental capacity and the genetic syndrome"); State v. Roberts, 544 P.2d 754, 758–59 (Wash. Ct. App. 1976) (examining the use of genetic defenses in the criminal context and rejecting their future application).

45. H.G. Brunner et al., *Abnormal Behavior Associated with a Point Mutation in the Structural Gene for Monoamine Oxidase A*, 262 SCIENCE 578, 578 (1993).

46. Amanda Evansburg, Note, *"But Your Honor, It's in His Genes": The Case for Genetic Impairments as Grounds for a Downward Departure Under the Federal Sentencing Guidelines*, 38 AM. CRIM. L. REV. 1565, 1571–72 (2001) (quoting Cecille Price-Huish, Comment, *Born to Kill? Aggression Genes and Their Potential Impact on Sentencing and the Criminal Justice System*, 50 SMU L. REV. 603, 609 (1997)).

47. *Id.* at 1572.

48. *Id*.

49. Virginia Morell, *Evidence Found for a Possible 'Aggression Gene'*, 260 SCIENCE 1722, 1722–23 (1993).

50. Due to difficulties in replicating this study, some have argued that the aggression gene found in Professor Brunner's study may only be applicable to the particular Dutch family. Evansburg, *supra* note 46, at 1572. So although Professor Bruner's research may not prove what it initially argued, mainly, that there is a particular gene that in mutated form can lead to high aggression, it still gives support to the widely held belief that genetics plays a role in abnormal behavior. For a detailed look at some of the fallout of the Brunner study, see *id*., at 1572–74.

between certain genes and violence, but that this effect is causal as well.[51]

Despite this promising research, it is unlikely that the isolation of any particular gene as the source of violent behavior will ever take place. Geneticist David Cummings commented that "[m]y feeling is there is certainly no 'gene' for criminal behavior. There are [only] genes which predispose people to an increased frequency of impulsive-compulsive behaviors and that put them at greater risk of being involved in criminal behavior."[52]

Nevertheless, many scientists agree that violent behavior can be traced in some part to the genetic makeup of the individual. For example, numerous credible studies performed on mice, as well as other studies of the brain, have identified certain hormonal levels, specifically nitric oxide, present in large amounts while the animal was engaging in aggressive behavior.[53] Mice with a decreased level of nitric oxide synthase "'don't seem to recognize social cues which would normally turn off reckless, impulsive or violent behavior.'"[54] These studies suggest that violent behavior may have at least some root in genetic composition.[55]

B. The Resulting Concern

The result of this genetics research, which shows that certain individuals may be predisposed to violent behavior, strikes directly at the core of the American criminal justice system. If an individual's genetic composition is such that, when stimulated by certain environmental factors, she becomes more likely to exhibit aggressive behavior, it becomes difficult to define her behavior as being completely "free."

For example, if two individuals, *X* and *Y*, are confronted with the same environmental stimuli,[56] the American criminal justice system

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51. Brunner et al., *supra* note 45, at 578.

52. Natalie Angier, *Disputed Meeting to Ask If Crime Has Genetic Roots*, N.Y. TIMES, Sept. 19, 1995, at C1.

53. A study at Johns Hopkins identified high amounts of nitric oxide as the likely cause of aggressive behavior. *See* Evansburg, *supra* note 46, at 1573 (identifying the study as proof of the importance of genetic factors in determining behavior).

54. *Id.* (quoting Douglas Birch, *Scientists Link Missing Gene in Mice to Violent Behavior; Only Males Affected by Induced Defect*, BALT. SUN, Nov. 23, 1995, at 1A).

55. For a more thorough (but also somewhat outdated) look at the various impacts of genetic influences on criminal behavior, see generally LAWRENCE TAYLOR, BORN TO CRIME: THE GENETIC CAUSES OF CRIMINAL BEHAVIOR (1984).

56. Because behavior is generally an interaction between biological and environmental stimuli, if the two individuals do not have the same environmental stimuli, making any judg-

treats them as if they have the same ability to make a choice to engage or not engage in a crime. But what if person *X*'s genetic makeup increases her likelihood of violent behavior by 70 percent, while person *Y* has a "normal" genetic makeup that leads to no higher probability of violence? Arguably, person *X* does not have the ability to make as free a choice, because a significant part of her decisionmaking process is dictated by her genetic code, pushing her toward violence. To be fair, person *X* has a diminished ability to make the correct legal choice in comparison to person *Y*. Yet the current American criminal justice system fails to recognize these genetic differences, and proceeds as if both individuals had the same capacity to control their choices. For this reason, any decisions to convict or punish that rely exclusively on free will as a rationale are in error.

III. CURRENT LEGAL SCHOLARSHIP

With its fundamental foundations thus questioned, some legal scholars have opined that a dramatic reordering of the criminal justice system will take place soon.[57] These scholars disagree about the extent to which these changes will be positive. Yet, they agree that genetics represents a unique set of problems for the criminal justice system. Their arguments essentially follow three steps.

A. Genetics Plays an Integral Role in Human Behavior

Some legal scholars interpret recent scientific findings of possible genetic links to traits such as aggression as proof that people are partially "genetically determined."[58] Moreover, some studies[59] have been cited by legal scholars for the proposition that a level of "genetic es-

ments about their ultimate behavioral decision is scientifically invalid. Thus to truly evaluate what effect genetics may play in criminal philosophy, one must assume that the environmental backdrop is in a controlled setting.

57. *E.g.*, Evansburg, *supra* note 46, at 1584; Steven I. Friedland, *The Criminal Law Implications of the Human Genome Project: Reimagining a Genetically Oriented Criminal Justice System*, 86 KY. L.J. 303, 324–41 (1998); Marcia Johnson, *Genetic Technology and Its Impact on Culpability for Criminal Actions*, 46 CLEV. ST. L. REV. 443, 462–70 (1998); Nygaard, *supra* note 21, at 437; Price-Huish, *supra* note 46, at 611, 625.

58. Price-Huish, *supra* note 46, at 603. (noting that "violent criminal behavior . . . may be the result of biological determinism as opposed to conscious choice-based decision making").

59. *See* Patricia A. Brennan et al., *Assessing the Role of Genetics in Crime Using Adoption Cohorts*, *in* GENETICS OF CRIMINAL AND ANTISOCIAL BEHAVIOR 115–22 (Gregory A. Boch & Jamie A. Goode eds., 1996) (chronicling adoption studies suggesting the link between genetics and violence).

sentialism" and "biological determinism" may exist in humans.[60] One scholar has even stated that genetic research may provide the most complete and final explanation of behavior, thereby ending the age-old puzzle as to why humans act the way they do.[61] Many of these scholars infer that genetics could or already does explain much of human behavior, and that the more insight one gains into genetic inheritance, the more one can understand criminal behavior.[62]

B. Genetics Represents a Unique Problem for the Criminal Justice System

Although there are slight differences among legal scholars regarding the implications of genetic research, they share a similar belief that these genetic findings will lead the criminal justice system into uncharted territory. Because genetics "causes" so much of human behavior, so their arguments go, the United States will be forced to create a new system based on biological modes of conduct rather than individual psychological decisionmaking.[63] This will then undermine the American criminal justice system's reliance on free will.[64]

Legislatures and courts, which have long defined criminal acts and crafted punishment schemes based on the notion of culpability, will have to justify these correctional measures, even though their connection to individual responsibility has been shaken.[65] In the past, when presented with external factors that might hinder an individual's ability to act freely, society has defined away the problem, by creating legal exceptions such as duress and insanity.[66] However, now, for the first time, these genetic realities may force the American criminal justice system to be almost entirely based on these excuse

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60. Johnson, *supra* note 57, at 455. The conclusions that some legal scholars have made about this science are different than those of the researchers themselves. Although they agree that violent fathers and their offspring share a gene that may increase the risk of schizophrenia, the scientists believe that the connection to violence could be based on a very complex combination of biological and environmental factors. *Id*. Thus the conclusion of "genetic essentialism" does not seem to be shared by those who were engaged in the study. *Id.* at 455–60.

61. Friedland, *supra* note 57, at 308 (citing TED PETERS, PLAYING GOD? GENETIC DETERMINISM AND HUMAN FREEDOM (1997)).

62. *Id*. (expounding on his belief of genetic essentialism); Johnson, *supra* note 57, at 455 (interpreting the studies as containing insight into criminal behavior).

63. Friedland, *supra* note 57, at 329.

64. *Id*.

65. Johnson, *supra* note 57, at 462.

66. *See id.* (noting that while the law generally presumes free will to impute criminal responsibility, it also "allow[s] deterministic influence of uncontrollable behavior as an exculpatory defense or mitigation of punishment").

exceptions. This could lead to a completely unworkable system where all are excused for every crime based upon their own individual predispositions.

C. The Criminal Justice System Must Be Modified or Revolutionized

Trusting the strong predictive value and uniqueness of genetics—the argument progresses—the philosophical underpinnings of the current system must be recast.[67] At least one commentator has speculated that society may even have to create a completely different set of criminal laws.[68] The result might be a partially deterministic system, with gradual levels of legal accountability based on the sum of all factors impeding one's behavior.[69] If this happens, it may be necessary to create an entirely new class of criminal defendants whose culpability would be excused if genetic testing showed that they were incapable of exercising free will.[70] Because it would be impossible to find any members of such a class guilty, society would need to find new ways to balance its obligation to protect the public and still comply with basic notions of justice.[71]

Professor Steven Friedland argues that genetic discoveries may also force society to fundamentally alter what it considers to be criminal.[72] As criminal behavior becomes more firmly rooted in the genetic makeup of the individual, it follows that an alteration of the underlying assumptions about what constitutes criminal responsibility will be necessary.[73] As genetics becomes more predictive of individuals' behavioral patterns, science will develop a broader understanding of what constitutes genetic normality by discovering what genetic patterns occur most often in a population.[74] Based on these genetic codes, one can learn which behaviors are most common or normal in a given society.[75] This new and apparently improved normalcy will be

67. *Id.* at 462–70 (arguing that the current American criminal justice system will need to undergo dynamic changes to allow for the societal necessity of response to criminal behavior).

68. Nygaard, *supra* note 21, at 430.

69. *Id.* at 433–34.

70. *Id.* at 462.

71. Johnson, *supra* note 57, at 470. Johnson expresses six possible options that society could choose to undertake: (1) release the defendant back into society; (2) find the defendant guilty but genetically impaired and confine him to a penal institution; (3) commit the defendant to a genetic treatment center; (4) isolate the defendant in a genetic compound; (5) promulgate genetic therapy; or (6) mitigate the punishment. *Id*.

72. Friedland, *supra* note 57, at 333.

73. *Id*.

74. *Id*.

75. *Id*.

free from the boundaries of an individual's circumstances or society's choices that are dependent upon its own particular culture.[76] Rather, the determination of normal behavior will be scientifically objective, and will aid in assessing which individuals should be held responsible for their actions.[77] Presumably those individuals who do not possess the normal genetic makeup will be held less culpable for the criminal actions they committed, because their makeup deviated from the societal mainstream.

Professor Friedland further posits that an individual's ability to change her behavior over time, whether through rehabilitation or change in environment will become "more questionable," thus rendering all punishment theories invalid.[78] The implications of this argument are staggering. Professor Friedland is predicting a systematic change not only in the decision of whether to punish, but also in the definition of what constitutes being "normal." Thus, scholars who share Friedland's view believe that "[o]ur way of life is destined to change."[79] They see genetics as altering the concept of individual choice and responsibility, thus revolutionizing the entire criminal justice system.[80]

IV. THE EXISTING SCHOLARSHIP CRITIQUED

Legal scholars predicting the end to the current criminal justice system are misguided for two reasons. First, they underestimate the staying power of the criminal justice system and its past resilience in the face of discoveries—mainly in the social sciences—that, arguably, should have similarly shaken its foundations. Second, they do not take into account the considerable role that punishment plays in acting as both a healing device and an outlet for revenge.[81] For these rea-

76. *Id*.

77. *Id*.

78. *Id*.

79. Nygaard, *supra* note 21, at 430–31.

80. *See* Friedland, *supra* note 57, at 333 ("Linking criminal behavior more firmly to genetics would create a new set of underlying assumptions in the area of criminal responsibility."). Professor Friedland sees the possible problems of just such a system, and is in no way advocating its enactment. *Id.* at 365–66. He is merely making a prediction, and although it does seem to be in an extreme form, his conclusions do not differ so substantially from other thought in the area that his predictive work is unrepresentative.

81. In other words, such scholars fail to consider the extent to which at least a subset of society subscribes to the "eye for an eye" definition of retribution. For a brief discussion of this definition, see *supra* notes 36–37 and accompanying text.

sons, observations predicting the demise of the criminal justice system would appear to be somewhat exaggerated.

A. The Sociological Experience with the Rotten Background Defense

In the last few decades, the American criminal justice system has come to recognize that environmental and social factors have a strong influence on the commission of criminal activity. A significant body of recent criminological research demonstrates that the lowest socioeconomic groups within society commit a disproportionate number of its violent crimes.[82] Economically impoverished communities tend to find themselves increasingly isolated, creating large cycles of poverty that have few escape possibilities for its members.[83] Individuals who spend their formative years under poor socioeconomic conditions, including high rates of violent crime, are sure to have their motivations and desires shaped by this background. It could be, as one scholar suggests, that a person subjected to a life of social deprivation may end up having as little control over her actions as one who is stricken with a mental disease.[84] If an individual has limited control over whether her actions conform to the constructs of society, she (like those with various genetic predispositions) may find herself without a true, free choice. Recognizing these factors minimizing free will, many legal advocates of the 1970s proposed a rotten social background defense to criminal prosecutions.

The most famous and eloquent proponent of this theory was former Judge David Bazelon.[85] Judge Bazelon recognized that the American criminal justice system has free will as its core concept, and that if social conditions in a person's life have made it impossible for her to have the ability to make lawful decisions, then the law should

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82. Deborah W. Denno, *Human Biology and Criminal Responsibility: Free Will or Free Ride?*, 137 U. PA. L. REV. 615, 646 (1988). Professor Denno does point out that there is a significant amount of research that disputes the correlation between crime and socioeconomic status. However, she makes it clear that this is the minority view and most research finds a significant correlation at play. *Id.* n.174.

83. *See* R. George Wright, *The Progressive Logic of Criminal Responsibility and the Circumstances of the Most Deprived*, 43 CATH. U. L. REV. 459, 481 (1994) (speaking to the continued problems that economic and social isolation visit upon society).

84. Kadish, *supra* note 2, at 284.

85. *See* United States v. Alexander, 471 F.2d 923, 957–65 (D.C. Cir. 1973) (Bazelon, C.J., concurring in part and dissenting in part) (raising the question whether an African-American youth who was raised in a socially deprived background could be held responsible for committing a crime in response to being the target of racial slurs). *See generally* David L. Bazelon, *The Morality of the Criminal Law*, 49 S. CAL. L. REV. 385 (1976).

excuse her conduct.[86] Judge Bazelon expanded upon this notion in a robbery and assault case:

> It may well be that we simply lack the resources—to say nothing of the understanding—that would be required if those who stole to feed their addiction were removed from the criminal process on the ground that they are not responsible for their actions. But if this is so, we should recognize the fact, and not rationalize our treatment of narcotics addicts on the false premise that their crimes are the result of a wrongful exercise of free will. It is to me intolerable that persons already crippled by an almost hopeless cycle of poverty, ignorance, and drugs should be further burdened by the moral stigma of guilt, not because they are blameworthy, but merely because we cannot afford to treat them as if they are not.[87]

Judge Bazelon's insight regarding an individual's inability to escape her environment applies equally to the genetics context. Individuals should not be blamed for genetic factors that limit their ability to exercise free will. Judge Bazelon concluded that it is intellectually dishonest to treat individuals as if they are creatures of their own free will when significant evidence refutes this idea. He further argued that the jury should hear evidence of all of the mental, emotional, and social processes of the defendant so that they could determine if her actual choice to commit a particular crime was voluntary.[88] Regardless of the efficacy of such a proposal, at least one judge has recognized that social factors outside of one's control can diminish one's capacity to execute one's free will.

The theories of Judge Bazelon and other social determinists have gained little popularity. The American criminal justice system currently does not recognize social deprivation as a legal excuse.[89] Courts have confronted and largely discounted or ignored sociological evidence of behavioral causation.[90] However, the criminal justice system

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86. *See* Bazelon, *supra* note 85, at 398 ("The real question, it seems to me, is how we can afford not to live up to our moral pretensions and not excuse unfree choices or nonblameworthy acts.") (emphasis omitted).

87. United States v. Carter, 436 F.2d 200, 210 (D.C. Cir. 1970) (Bazelon, C.J., concurring) (emphasis omitted).

88. Washington v. United States, 390 F.2d 444, 453 (D.C. Cir. 1967).

89. George Vuoso, *Background, Responsibility, and Excuse*, 96 YALE L.J. 1661, 1661 (1987).

90. *See, e.g.*, United States v. Manzella, 791 F.2d 1263, 1269 (7th Cir. 1986) (stating that "the temptation to obtain whatever gains, pecuniary or nonpecuniary . . . is a cause of the crime but not a cause that exonerates the tempted from criminal liability if he yields, just as poverty is not a defense to larceny").

may be more likely to integrate genetics because—unlike social science—genetics is "hard" science.

Most legal scholars, judges and policy makers, intuitively give greater credibility to the hard sciences (such as biology and chemistry) than the social sciences.[91] *United States v. Moore*[92] illustrates this point. *Moore* involved an addiction defense to a crime of drug possession.[93] The judges' theories on the validity of free will were varied, but both sides agreed that there must be hard scientific evidence before they could justify an excuse. Judge Levanthal, writing for two members of the majority rejecting the defense, said that, to justify excuse, an individual must have a "disability that is both gross and verifiable."[94] Concurring, Judge Wilkey emphasized that, in considering defenses, one must weigh the "physical craving" with the person's "strength of character."[95] It is noteworthy that both judges use words such as "disability" and "physical," implying that, for there to be a justifiable excuse, it must come from the individual's biological makeup. Even Judge Wright in dissent recognized that, for an excuse to be valid, it must come from a "disease" that has overcome an individual's decisionmaking process.[96]

The *Moore* case illustrates a broader principle seen in the law, namely, that physical infirmities are much more likely to be met with favor by the criminal justice system. Nevertheless, the sociological experience of the 1970s and the struggle by the courts to incorporate these findings into their jurisprudence demonstrate the resiliency of the criminal justice system. Regardless of the exact impact that genetics will have, the point remains that the criminal justice system is naturally predisposed to distance itself from radical change.

B. Therapeutic Role of Punishment: Desire for Revenge

Along with underestimating the resiliency of the criminal justice system, legal scholars also underestimate the therapeutic role that punishment plays in American society. One of the key roles of the criminal justice system is to act as an outlet for the revenge-based mo-

91. *See, e.g.*, Jenson v. Eveleth Taconite Co., 130 F.3d 1287, 1297 (8th Cir. 1997) (emphasizing that "there are social sciences in which the research, theories and opinions cannot have the exactness of hard science methodologies").

92. 486 F.2d 1139 (D.C. Cir. 1973) (en banc).

93. *Id.* at 1142.

94. *Id.* at 1180 (Levanthal, J., concurring) (quoting MODEL PENAL CODE § 2.09 cmt. at 6 (Tentative Draft No. 10, 1960)).

95. *Id.* at 1145 (Wilkey, J., concurring).

96. *Id.* at 1243 (Wright, J., dissenting).

tives of the individual victim in particular, and the greater society in general. The desire for revenge "is a current, deep American trait."[97] Seen in this light, revenge is a natural human trait, one that seeks the expression of a deep, primitive desire to impose a counter bad act upon those who have caused harm. When a person has been a victim of cruelty, it is her natural inclination to seek to victimize the victimizer.[98] The criminal justice system satisfies this desire by allowing the victim and society to act upon their revenge through the imposition of harsh criminal sentences.

The centrality of the role that revenge plays can be seen in decisions such as *Payne v. Tennessee*,[99] which make the individual characteristics and suffering of the victim relevant to the sentencing determinations of the criminal by the process of victim impact statements.[100] The statements attempt to illustrate the unique pain that the particular victim feels, enabling the sentencing body to place themselves in the shoes of these victims, thus rendering them capable of enacting the necessary revenge. The centrality of revenge is thus so widespread and pervasive in the criminal justice system that it could be considered one of its central tenets.[101] A criminal justice system that incorporates genetic factors into its sentencing process will not satisfy this desire for revenge, as there will be no way for the victim and society to act upon their natural desires. By not accounting for this desire in their vision of a future criminal justice system, current legal scholars underestimate its role in current punishment. Any true vision of a future American criminal justice system must consider the role that revenge plays in the American system of punishment while also integrating into it a projection of the effect of a radical change, such as that of a supposed "genetic revolution."

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97. Bruce Ledewitz & Scott Staples, *No Punishment Without Cruelty*, 4 GEO. MASON U. CIV. RTS. L.J. 41, 56 (1993).

98. *See id.* at 53 (noting the phenomenon of "victimizing the victimizer" in connection with antislavery literature (citing PHILIP P. HALLIE, HORROR AND THE PARADOX OF CRUELTY 89 (1969)).

99. 501 U.S. 808 (1991).

100. *See* Ledewitz & Staples, *supra* note 97, at 54 (explaining *Payne v. Tennessee* by noting the correlation between victim impact statements and revenge-based motives in penological determinations).

101. *See id.* at 57 (arguing that the purposes of the criminal justice system are deterrence, incapacitation, retribution, rehabilitation, and revenge).

V. THE LIKELY IMPACT OF GENETICS ON CRIMINAL JUSTICE

The status quo requires that numerous cursory conclusions be drawn about free will, but the genetics research calls at least some of those conclusions into question. Society has three choices: (1) it can continue in its current approach—which would be intellectually dishonest; (2) it can change the system drastically; or (3) it can alter its understanding of why it punishes to accommodate genetics research. This Note first assumes both that the first choice is undesirable and that, for the reasons set forth in Part IV, the criminal justice system will not be drastically reordered. This Note then argues that society will realign its basis for punishment—swinging back to utilitarian rationales—in order to address the import of recent genetic research.

The question then becomes how to conform to what genetics research teaches while still making it possible to convict and punish those that pose a threat to the rest of society. In other words, given that courts and legislatures will not be able to rely on free will assumptions to the same extent as they have in the past, where then can they turn to justify imposing punishment and still stay intellectually honest?

Utilitarian-based rationales provide an answer.[102] For the utilitarian, the criminal law is an instrument of social education and motivation.[103] Utilitarians punish individuals not so much because of their own culpability, but because they hope to avoid the conduct that leads to societal harm.[104] The goal is to deter future conduct not only by the individual herself, but by society as a whole. Individuals are part of a greater collective and must sacrifice their own individual liberty for the greater good. Thus, under utilitarian conceptions of punishment, individual culpability is not a prerequisite to punishment.[105] Their mere presence in society provides the necessary justification.

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102. The utilitarian conception of punishment owes its roots to past thinkers, the most famous of whom is Jeremy Bentham. *See* David M. Estlund, *Who's Afraid of Deliberative Democracy? On the Strategic/Deliberative Dichotomy in Recent Constitutional Jurisprudence*, 71 TEX. L. REV. 1437, 1438 (1993) (citing Jeremy Bentham and John Stuart Mill as the founders of modern utilitarianism).

103. MOUSOURAKIS, *supra* note 4, at 44.

104. *Id.*

105. The maintenance of some form of a criminal justice system is necessary for any free society. Even the staunchest advocate of individual rights would likely recognize that society has a valid objective in attempting to prevent socially harmful behavior. *See id.* (arguing that "for the utilitarian, recognizing legal excuses is another requirement of a criminal law system concerned with the maximization of general welfare, not with punishment of wrongdoers as such"). There are gains that benefit all of society in preventing crime by punishing those who have committed socially undesirable acts, even if they had little to no control over their decision.

There has always been an undertone of utilitarian thought in American criminal justice theory.[106] Justice Hugo Black once wrote that the penal system served more interests than punishing an individual:

> Apart from the value of jail as a form of treatment, jail serves other traditional functions of the criminal law . . . . [I]t gets the alcoholics off the street, where they may cause harm in a number of ways to a number of people, and isolation of the dangerous has always been considered an important function of the criminal law.[107]

Justice Oliver Holmes expressed this notion even more bluntly:

> If I were having a philosophical talk with a man I was going to have hanged (or electrocuted) I should say, I don't doubt that your act was inevitable for you but to make it more avoidable by others we propose to sacrifice you to the common good. You may regard yourself as a soldier dying for your country if you like. But the law must keep its promises.[108]

In short, to be philosophically valid, the critical question in determining punishment will no longer be the *mens rea* of the individual committing crime, but rather, the effect that the commission of the crime has on the general society.

Judge Richard Posner argues that as scientific research advances and learns more about the roots of individual behavior, criminal responsibility becomes increasingly "external."[109] Society will worry less about the intent of the person committing the crime and more about what conduct has been undertaken.[110] Even if one does not find Judge Posner's theories appealing,[111] his argument that an individual's behavior may be caused by something greater than her own culpability, and that punishment may still be inflicted even when caused by outside factors, comports with the conclusions in this Note.

Utilitarian theory is open to many criticisms. Many argue that any theory that is based on the greater good of the collective over the

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106. *See supra* Part I.C (observing that utilitarian-based rationales are not new).

107. Powell v. Texas, 392 U.S. 514, 539 (1968) (Black, J., concurring).

108. Hill, *supra* note 6, at 2065 (1988) (quoting 1 HOLMES-LASKI LETTERS: THE CORRESPONDENCE OF MR. JUSTICE HOLMES AND HAROLD J. LASKI, 1916–1935, at 806 (Mark De Wolfe Howe ed., 1953)).

109. RICHARD A. POSNER, THE PROBLEMS OF JURISPRUDENCE 168–69 (1990).

110. *Id.*; *see also* Nygaard, *supra* note 21, at 433 ("There may be no excuse in law for what one does even if there is a reason.") (emphasis omitted).

111. Judge Posner's discussions of humans as "unreasonably dangerous machines" do make it difficult to accept him as a humanist. POSNER, *supra* note 109, at 168.

rights of the individual is fundamentally flawed.[112] Utilitarianism is criticized for its adherence to the will of the majority, which can produce intolerance of minority views.[113] The latter worry is especially sharp in the area of criminal law, where often the individuals charged have little in the way of resources necessary to advocate their rights to the greater society.[114]

These critiques raise important issues and will likely have even greater resonance in the context of genetic findings. Perhaps a societal consensus will emerge that some forms of individual compulsion, whether based on genetics or social background, are so strong that societies benefit little by punishing these individuals, and that they should be able to put forward these "excuses."[115] At the same time however, individuals also have a strong desire to be protected from "victimhood,"[116] and may then have little problem accepting the lesser premium placed on individual culpability to achieve this goal. Utilitarian theory will thus fill the void created by the loss of the myth of free will. Without individual choice, punishment will be justified by appealing to the greater good and the maintenance of a better society. This allows the criminal justice system to avoid the difficult questions concerning the cause of actual behavior, and deal with the more simplistic hope of "keeping the streets safe."

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112. *See, e.g.*, RONALD DWORKIN, LAW'S EMPIRE 291 (1986) (exposing the "defects in the academic elaboration of [utilitarianism] by calling attention to moral convictions that remain powerful even in hypothetical forms").

113. *See, e.g.*, John C. Duncan, Jr., *The American 'Legal' Dilemma: Colorblind I/ Colorblind II—The Rules Have Changed Again: A Semantic Apothegmatic Permutation*, 7 VA. J. SOC. POL'Y & L. 315, 354 (2000) (criticizing utilitarianism's "'inability to provide an adequate theoretical foundation for securing individual rights and the protection of minorities'") (quoting Frederick Rosen, *Majorities and Minorities: A Classical Utilitarian View*, *in* NOMOS XXXII MAJORITIES AND MINORITIES (John W. Chapman & Alan Wertheimer, eds., 1990)).

114. This problem is likely the most difficult critique of utilitarian theory, and is also likely the most difficult obstacle that will be necessary to overcome in future criminal jurisprudential thought. The shift to utilitarian thought is not one based upon its normative value. Utilitarian thought sacrifices much of the individuality that is necessary for the preservation of rights and freedoms. Nevertheless, if the system of criminal justice is to maintain intellectual cohesion, the shift is required. The hope is that those who are in charge of creating the system and maintaining constitutional freedoms would recognize that some form of rights for the minority is of benefit to society as a whole.

115. One could see how a debate would hinge on whether punishing those who are unable to control themselves would help society by keeping them off the street or would be of no benefit due to the negligible deterrent value. Jeremy Bentham goes as far as to say that excuses should only be granted when there is no deterrent value available. Kadish, *supra* note 2, at 263 (citing JEREMY BENTHAM, AN INTRODUCTION TO THE PRINCIPLES OF MORALS AND LEGISLATION 160–62 (J.H. Burns & H.L.A. Hart eds., 1970)).

116. Ledewitz & Staples, *supra* note 97, at 51 (1993).

CONCLUSION

It is clear with the recent advancements in the field of genetics that the free will foundation upon which the criminal justice system is based is in serious jeopardy. Justifications of punishment that rely on the individual culpability of the actor become difficult to justify when causal factors influence their behavior. Nevertheless, the maintenance of social order is still an important goal for all societies. Current legal scholarship recognizes this, but suggests that the American criminal justice system is likely to implode due to the shattering of its foundation in free will. For these scholars, the end result is a deterministic system, destined to be unworkable and unacceptable to most of society.

These scholars underestimate the resiliency of the criminal justice system. Genetic discoveries will alter the vision of what it means to participate in criminal justice. The core acceptance of free will and the corresponding dependence on individual responsibility will no longer be embraced in American criminal jurisprudence. It is only the utilitarian theory of punishment that can survive the implications of genetic findings, while still providing a system that allows for the maintenance of societal order and showcasing the human need to see individual suffering. American criminal jurisprudence will thus focus less on the individual and more on the greater society in evaluating various modes of punishment.[117] It is this radical reformulation as to the very reason society punishes individuals that will be the true long-term effect of the genetic revolution on criminal law.

117. In conclusion, it must be made clear that my argument is not normative. Depending on how they are defined, utilitarian-based punishment rationales can lead to extremely harmful results for civil liberties and the principle of individualized justice. Thus, I am not advocating these rationales as philosophical justifications for punishment, but rather am predicting society's ultimate acceptance of them, regardless of their normative benefit.