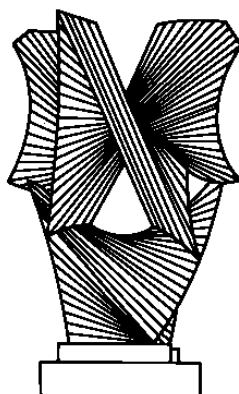


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HAPPINESS AND PUNISHMENT

John Bronsteen, Christopher Buccafusco, and Jonathan Masur

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Happiness and Punishment

John Bronsteen, Christopher Buccafusco, and Jonathan Masur[†]

Now as for the future of reflection about punishment: First, I think we can look forward to continued valuable illumination from the social-science disciplines¹

I. INTRODUCTION

When the state punishes a criminal, it purposely inflicts suffering on one of its citizens. If that act is to be justified, limits must be set on the amount and type of suffering that may be imposed. A justification therefore requires an understanding of the ways in which punishment actually inflicts suffering on those punished. How and to what extent do fines and incarceration negatively affect happiness or well-being? The answers might seem obvious, but as we have indicated in the context of civil settlement,² recent empirical work in behavioral psychology suggests otherwise.

This empirical work reveals that people adapt to monetary fines far better than they expect. Paying a fine initially decreases an offender's level of happiness, but that level rebounds quickly toward its initial state. Even large fines have only minor effects on the well-being of those who receive them, because people adjust quite easily to their new financial circumstances. Adaptation thus reduces heavily the punitive consequence of a fine.

Prison has a more complicated effect on happiness. On the one hand, it is similar to a fine in that people adapt well to being in prison. Their happiness drops at the beginning and they expect it to remain low, but it rebounds impressively as they adjust to their new surroundings. On the other hand, virtually any period of incarceration, no matter how brief, has consequences that negatively affect prisoners'

[†] Assistant Professor, Loyola University Chicago School of Law; Visiting Assistant Professor, University of Illinois College of Law; and Assistant Professor, University of Chicago Law School, respectively.

¹ Herbert Morris, *Concluding Remarks: The Future of Punishment*, 46 UCLA L. Rev. 1927, 1930 (1999).

² John Bronsteen, Christopher Buccafusco, and Jonathan Masur, *Hedonic Adaptation and the Settlement of Civil Lawsuits*, 108 COLUM. L. REV. (forthcoming 2008), available at <http://ssrn.com/abstract=1098271>.

lives in ways that resist adaptation, even after they have been released. Prisoners are often abandoned by their spouses and friends, face difficulty finding and keeping employment, and must grapple with incurable diseases contracted during their incarceration. Thus, living in prison itself becomes less oppressive with time, but the effects of having been in prison tend to linger and to diminish happiness indefinitely.

These results differ dramatically from the standard assumptions that underlie both penal policy and philosophical scholarship on punishment. All major accounts of punishment place a high value on proportionality: more serious crimes warrant more severe punishment, either to effect greater deterrence, to repay the offender adequately for her misdeeds, to express the appropriate level of societal condemnation, or some combination thereof. But owing to the ways in which people do and do not adapt to various hardships, our current methods of punishment are too blunt for proportional punishments to be fashioned.

Contrary to expectations, *adjusting the size of a fine or the length of a prison sentence does not meaningfully adjust the amount of unhappiness that is ultimately experienced by the offender*. Paying more money or staying in prison for a longer period are highly susceptible to adaptation. As a result, virtually any fine imposes only fleeting harm. On the other hand, virtually any term of imprisonment imposes large and lasting harm by causing disease, unemployment, and loss of social connection; but longer prison terms do not diminish happiness much more than do shorter ones. It is therefore impossible to tailor a punishment to fit the severity of a crime, given the penal options available.

In addition to depriving punishment of its proportionality, adaptation has other significant effects. It diminishes the harm imposed by a monetary fine without diminishing the fine's capacity to deter, because would-be offenders will mistakenly expect a large fine to decrease their happiness substantially. Adaptation to the actual time spent in prison works similarly, but that phenomenon works at cross-purposes with the fact that post-prison life is worse than has been assumed by most theorists and legislators. In designing a system of punishment, scholars and policymakers must account for the ramifications of hedonic adaptation in order for their penal regimes to reflect the actual experience of punishment. This necessity holds for retributive and utilitarian theorists alike.

Our aim in this article is to use recent psychological findings to describe more accurately the effects of punishment. In Part I, we analyze the findings themselves and the studies that give rise to them. In Part II, we apply the findings to the utilitarian theory of punishment, and in Part III we apply them to retributive and mixed theories of punishment. We assess the import of the findings for each theory and the new challenges they pose for criminal justice.

I. THE HEDONIC CONSEQUENCES OF PUNISHMENT

All leading theories of criminal punishment must be concerned with the way punishment is subjectively experienced by the offender.³ Until recently, however, little was known about how people responded to the various punishments inflicted on them. Over the past couple of decades, and especially in the last few years, an interdisciplinary group of social scientists has begun to develop techniques for accurately measuring the subjective pain—physical and psychological—that punishment inflicts.

This research on the subjective experience of punishment is part of a larger body of social science research devoted to the measurement and determinants of subjective well-being.⁴ Motivated by the belief that individual self-reports provide the best metrics of well-being, hedonic psychology (or simply *hedonics*) has emerged as one of the most vibrant fields in the behavioral sciences.⁵ Among its most robust and consistent findings are two that are highly relevant to the study of punishment: 1) most life events, whether positive or negative, exert little lasting effect on an individual's well-being because people adapt rapidly to them; and 2) people do not recognize or remember how quickly they adapt and thus make very poor

³ See Adam Kolber, *The Subjective Experience of Punishment*, COLUM. L. REV. (forthcoming 2009), available at <http://ssrn.com/abstract=1090337>. Kolber writes, “[A] successful theory of punishment must take account of offenders’ subjective experiences when assessing punishment severity.” *Id.* at 5.

⁴ See Daniel Kahneman et al., *Preface*, in *WELL-BEING: THE FOUNDATIONS OF HEDONIC PSYCHOLOGY* ix (Daniel Kahneman et al., eds. 1999).

⁵ Hedonic psychology has also had a substantial impact on American popular culture through works like Malcolm Gladwell’s *Blink*, Daniel Gilbert’s *Stumbling on Happiness*, and Jonathan Haidt’s *The Happiness Hypothesis*.

estimates about the hedonic impact of future events.⁶ Studies have shown that, after immediate, short-term changes, people rapidly return to prior levels of well-being following experiences ranging from learning that they scored poorly on a personality test⁷ to becoming paraplegic.⁸

This Part explores evidence for hedonic adaptation to the two principal forms of punishment used in the United States, monetary fines and imprisonment.⁹ Recent social scientific studies support the notion that criminals adapt extremely rapidly to these punishments, and that increasing their magnitude, through larger fines or longer prison terms, will have little effect on the punishments' overall hedonic impact. Yet while offenders are likely to adapt quickly to paying fines and spending time in prison, other research has shown that incarceration substantially affects ex-inmates for many years following prison. People who have spent any time in prison are significantly more likely to experience chronic, stress-related health impairments, unemployment, and the breakdown of psychologically vital social ties. Unlike fines and imprisonment itself, these post-prison consequences of incarceration are likely to generate substantial and long-lasting hedonic penalties for ex-inmates regardless of the lengths of their sentences.

A. *Hedonic Adaptation and Affective Forecasting*

In a now-classic study published in 1978, Philip Brickman and his colleagues compared recent lottery winners and recently paralyzed

⁶ Timothy D. Wilson et al., *Focalism: A Source of Durability Bias in Affective Forecasting*, 78 J. PERSONALITY & SOC. PSYCHOL. 821 (2000) (hereinafter *Focalism*).

⁷ Daniel T. Gilbert et al., *Immune Neglect: A Source of Durability Bias in Affective Forecasting*, 75 J. PERSONALITY & SOC. PSYCHOL. 617 (1998) (hereinafter *Immune Neglect*).

⁸ C. Lundqvist et al., *Spinal Cord Injuries: Clinical, Functional, and Emotional Status*, 16 SPINE 78 (1991).

⁹ Although we focus on fines and imprisonment, our arguments are certainly relevant to debates about less traditional forms of punishment, including shaming. See, e.g., Dan M. Kahan, *What Do Alternative Sanctions Mean?*, 63 U. CHI. L. REV. 591, 593 (1996). For brevity's sake, we also do not discuss certain punishments that are traditionally viewed as lighter than fines, such as probation and community service. See NORVAL MORRIS & MICHAEL TONRY, *BETWEEN PRISON AND PROBATION: INTERMEDIATE PUNISHMENTS IN A RATIONAL SENTENCING SYSTEM* 6-7 (1990).

paraplegics and quadriplegics with control groups. The lottery winners were not much happier than the controls, and the accident victims were considerably happier than anticipated, reporting levels of well-being above the scale's midpoint.¹⁰ According to Brickman, these results indicated that people experience life as if on a "hedonic treadmill" such that positive and negative life events create only temporary departures from an established well-being set point.¹¹ This theory has been enormously influential in the social sciences, particularly as it has challenged the traditional economic understanding of utility.¹² Moreover, it has motivated innumerable studies exploring the hedonic consequences of a large variety of events.¹³

These studies, whether of responses to income gains,¹⁴ tenure denial,¹⁵ or disability,¹⁶ often report similar findings: "most people are reasonably happy most of the time, and most events do little to change that for long."¹⁷ The many studies examining people's experiences with disability provide the most compelling evidence.¹⁸ For example, people with spinal cord injuries report levels of well-being similar to those of healthy controls,¹⁹ as do burn victims,²⁰ patients with colostomies²¹ and those undergoing dialysis for treatment of kidney

¹⁰ See Philip Brickman et al., *Lottery Winners and Accident Victims: Is Happiness Relative?*, 36 J. PERSONALITY & SOC. PSYCHOL. 917, 920-21 (1978).

¹¹ See Philip Brickman & Donald Campbell, *Hedonic Relativism and Planning the Good Society*, in ADAPTATION LEVEL THEORY: A SYMPOSIUM 287 (M.H. Appley ed. 1971).

¹² See Daniel Kahneman, *Objective Happiness*, in WELL-BEING, *supra* note 4, at 13-15.

¹³ For an early review, see Shane Frederick & George Loewenstein, *Hedonic Adaptation*, in WELL-BEING, *supra* note 4, at 312.

¹⁴ See Richard Easterlin, *Explaining Happiness*, 100 PROCEEDINGS OF THE NAT'L ACAD. OF SCI. 11,176, 11,178 (2003).

¹⁵ See Gilbert et al., *Immune Neglect*, *supra* note 7, at 622-23.

¹⁶ See Andrew J. Oswald & Nattavudh Powdthavee, *Does Happiness Adapt? A Longitudinal Study of Disability With Implications for Economists and Judges*, J. PUB. ECON. (forthcoming 2008), available at <http://ssrn.com/abstract=921040>.

¹⁷ Gilbert et al., *Immune Neglect*, *supra* note 7, at 618.

¹⁸ For a review of these studies and their implications for legal settlement, see Bronsteen, Buccafusco, & Masur, *supra* note 2, at 4-12.

¹⁹ See Lundqvist et al., *supra* note 8, at 80.

²⁰ David R. Patterson et al., *Psychological Effects of Severe Burn Injuries*, 113 PSYCHOL. BULL. 362, 362 (1993).

²¹ Norman F. Boyd et al., *Whose Utilities for Decision Analysis?*, 10 MED. DECISION MAKING 58, 66 (1990).

disorders.²² In the most recent longitudinal study of adaptation, economists tracked the subjective well-being ratings of people who subsequently became disabled and remained so. They found that in only two years, subjects had substantially adapted to their injuries.²³ Although the psychological mechanisms underlying hedonic adaptation remain poorly understood, it seems as if people have a “psychological immune system” that helps them cope with the effects of many kinds of events.²⁴

While adaptation seems pervasive, further research has demonstrated its limits.²⁵ Thus, people are less likely to adapt to some health-related stimuli like noise,²⁶ chronic headaches,²⁷ and certain degenerative diseases such as rheumatoid arthritis,²⁸ multiple

²² See Jason Riis et al., *Ignorance of Hedonic Adaptation to Hemodialysis: A Study Using Ecological Momentary Assessment*, 134 J. EXPERIMENTAL PSYCHOL. 3, 6 (2005).

²³ See Oswald & Powdthavee, *supra* note 16, at 13-14. As a group, people who became disabled reported an average well-being score of 4.8 for the two years preceding disability, an abrupt fall to 3.7 at the onset of disability, and then a subsequent rebound to 4.1 in the next two years despite the fact that the disabilities themselves had not changed. Separating the moderately and severely disabled groups, the authors find approximately 50% adaptation to moderate disability and 30% adaptation to severe disability. Thus, there is substantial evidence that hedonic adaptation to disability is significant (if incomplete). *Id.*

²⁴ Gilbert, et al., *Immune Neglect*, *supra* note 7, at 619. They write, “Ego defense, rationalization, dissonance reduction, motivated reasoning, positive illusions, self-serving attribution, and self-justification are just some of the terms that psychologists have used to describe the various strategies, mechanisms, tactics, and maneuvers of the psychological immune system.” *Id.* Similarly, Daniel Kahneman and Richard Thaler note that attention is normally directed towards novelty, including changes in response to disability. Therefore, “as the new state loses its novelty it ceases to be the exclusive focus of attention, and other aspects of life again evoke their varying hedonic responses.” Daniel Kahneman & Richard Thaler, *Utility Maximization and Experienced Utility*, 20 J. ECON. PERSPECTIVES 221, 230 (2006). These coping strategies are evolutionarily adaptive, allowing people to recover quickly from considerable misfortune.

²⁵ See Frederick & Loewenstein, *supra* note 13, at 312.

²⁶ See Neil. D. Weinstein, *Community Noise Problems: Evidence Against Adaptation*, 2 J. ENVIR. PSYCHOL. 87, 87 (1992).

²⁷ See Victoria Guitera et al., *Quality of Life in Chronic Daily Headache*, 58 NEUROLOGY 1062 (2002).

²⁸ See C.A. Smith & K.A. Wallston, *Adaptation in Patients with Chronic Rheumatoid Arthritis: Application of a General Model*, 11 HEALTH PSYCHOL. 151, 151 (1992).

schlerosis,²⁹ HIV/AIDS,³⁰ and hepatitis C infection.³¹ Additionally, socially relevant stimuli such as divorce,³² the death of a spouse,³³ and unemployment³⁴ prove incredibly difficult to adapt to, with hedonic penalties lasting even after remarriage or reemployment.

Although adaptation's effects are substantial, they are hardly ever recognized or remembered. Research on affective forecasting – the ability to predict how future events will make you feel – has repeatedly shown that people suffer from both *impact* and *duration* biases causing them to overestimate the size and the length of hedonic experiences.³⁵ For example, people generally predict that becoming disabled will have an enormous and long-lasting impact on their happiness, despite the fact that most people adapt rapidly to disability.³⁶ According to Daniel Gilbert and Timothy Wilson, people suffer from focusing illusions caused by paying too much attention to the few changes wrought by new events while ignoring the many things that remain the same.³⁷

²⁹ See R.F. Antonak & H. Livneh, *Psychosocial Adaption to Disability and Its Investigation Among Persons with Multiple Sclerosis*, 40 SOC. SCI. & MED. 1099, 1103 (1995) (reporting that people suffering from MS report higher levels of depression than healthy people).

³⁰ See Ron D. Hays et al., *Health-related Quality of Life in Patients with Human Immunodeficiency Virus Infection in the United States: Results from the HIV Cost and Services Utilization Study*, 108 AM. J. OF MED. 714 (2000).

³¹ See Judith I. Tsui et al., *The Impact of Chronic Hepatitis C on Health-Related Quality of Life in Homeless and Marginally Housed Individuals with HIV*, 11 AIDS BEHAV. 603 (2007).

³² See Richard E. Lucas et al., *Reexamining Adaptation and the Set Point Model of Happiness: Reactions to Changes in Marital Status*, 84 J. PERSONALITY & SOC. PSYCHOL. 527 (2003).

³³ *Id.*

³⁴ See Richard A. Easterlin, *Does Economic Growth Improve the Human Lot? Some Empirical Evidence*, in *NATIONS AND HOUSEHOLDS IN ECONOMIC GROWTH* 89 (P.A. David & M.W. Reder, eds. 1974).

³⁵ See Timothy D. Wilson & Daniel T. Gilbert, *Affective Forecasting: Knowing What to Want*, 14 CURRENT DIRECTIONS IN PSYCHOL. SCI. 131 (2005).

³⁶ See Peter A. Ubel et al., *Disability and Sunshine: Can Hedonic Predictions Be Improved by Drawing Attention to Focusing Illusions or Emotional Adaptation?*, 11 J. EXPERIMENTAL PSYCHOL.: APPLIED 111, 111 (2005) (“One of the most commonly replicated ‘happiness gaps’ is that observed between the self-rated quality of life of people with health conditions and healthy people’s estimates of what their quality of life would be if they had those conditions . . .”).

³⁷ See Wilson et al., *Focalism*, *supra* note 6, at 822; Daniel T. Gilbert & Timothy D. Wilson, *Prospection: Experiencing the Future*, 317 SCIENCE 1351 (2007).

Significantly for our interests, these findings apply not just to rare occurrences such as becoming disabled but also to more regularly recurring events like being dumped by a boy/girlfriend, seeing your favorite football team lose, and being passed over for a job.³⁸ Learning from past hedonic experiences is rare, because the process of doing so is complex.³⁹ It requires that people recognize that they have experienced a similar event in the past, make an effort to remember how that event made them feel, and accurately recall their reaction.⁴⁰ The last of these is a particularly steep burden.⁴¹ Thus, even people with substantial previous experience with a stimulus are unlikely to remember that its hedonic impact was both weaker and shorter than predicted.

B. *Adaptation to Economic Loss*

Perhaps hedonic psychology's only finding more important—and more counterintuitive—than adaptation to disability is its consistent evidence of money's limited hedonic impact. Since the economist Richard Easterlin first proposed his “paradox” about the lack of correlation between income and happiness, numerous studies have supported the idea that, except below the level of subsistence, increased income produces very limited gains in subjective well-being.⁴² A variety of explanations for this phenomenon have emerged, ranging from constantly rising aspiration levels⁴³ to altered social comparisons,⁴⁴ but the message is clear: money can't buy happiness.

³⁸ See Gilbert et al., *Immune Neglect*, *supra* note 7.

³⁹ See Peter Ayton et al., *Affective Forecasting: Why Can't People Predict Their Emotions?*, 13 THINKING & REASONING 62 (2007).

⁴⁰ Deborah A. Kermer et al., *Loss Aversion Is an Affective Forecasting Error*, 17 PSYCHOL. SCI. 649, 652 (2006).

⁴¹ See Timothy D. Wilson et al., *Lessons From the Past: Do People Learn from Experience That Emotional Reactions are Short-Lived?*, 27 PERSONALITY & SOC. PSYCHOL. BULL. 1648, 1649 (2001). According to Christianson and Safer, “There are apparently no published studies in which a group of subjects has accurately recalled the intensity and/or frequency of their previously recorded emotions.” *Quoted in id.*

⁴² For a review of the extensive literature, see Ed Diener & Robert Biswas-Diener, *Will Money Increase Subjective Well-Being: A Literature Review and Guide to Needed Research*, 57 SOC. INDICATORS RES. 119 (2002).

⁴³ See Easterlin, *supra* note 14, at 11,178.

⁴⁴ See Diener & Diener, *supra* note 42, at 147.

But can losing money make you less happy? There is less research on the hedonic impact of economic losses, but what does exist suggests that people adapt to losses much as they do gains.⁴⁵ In one study, subjects who lost a \$3 gamble had returned very close to pre-gamble happiness levels in only 10 minutes.⁴⁶ Although these amounts and time periods are rather small, the authors extrapolate to more substantial sums: “even though losing \$7,500 does have a larger hedonic impact than winning \$10,000, it probably does not have as great an impact as people expect.”⁴⁷ More significantly, Ed Diener and colleagues tracked people who lost at least half a standard deviation of their annual income in a longitudinal study over a period of nine years.⁴⁸ Not only were these people not unhappier than those whose incomes didn’t change or whose incomes increased, they were actually happier.⁴⁹

As we will explore later, studies such as these call into question traditional rationales for the imposition of monetary penalties on criminal offenders. Although such penalties will likely cause immediate decreases in offenders’ well-being, their effects will probably be smaller and of shorter duration than predicted. And just as adding \$20,000 to your \$100,000 annual salary produces almost no more happiness than adding \$10,000, losing \$20,000 is probably not significantly worse than losing half that amount.

C. *Adaptation to Imprisonment*

Monetary fines are regularly used as punishment in the United States, but imprisonment serves as the “linchpin” of the nation’s

⁴⁵ It is worth pointing out that hedonic adaptation to losses may not be identical to adaptation to gains. Research from the field of behavioral decision theory has repeatedly shown that losses loom larger psychologically than do gains. See Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 *ECONOMETRICA* 263 (1979). Indeed, losses trigger stronger neural activity than do gains. See Roy F. Baumeister et al., *Bad is Stronger than Good*, 5 *REV. GEN. PSYCHOL.* 323 (2001); John T. Cacioppo & G.G. Bernston, *Relationship Between Attitudes and Evaluative Space: A Critical Review With Emphasis on the Separability of Positive and Negative Substrates*, 115 *PSYCHOL. BULL.* 401 (1994).

⁴⁶ See Kermer et al., *supra* note 40, at 651.

⁴⁷ *Id.* at 652.

⁴⁸ Ed Diener et al., *The Relationship Between Income and Subjective Well-Being: Relative or Absolute?*, 28 *SOC. INDICATORS RES.* 195 (1993).

⁴⁹ *Id.* at 209 (although not statistically significantly so).

response to crime,⁵⁰ and understanding its effects on offenders is essential. Social scientific interest in prisoners' responses to incarceration began in the 1950s following Donald Clemmer's theory of *prisonization*, the steady deterioration in prisoners' physical and psychological health over the course of a sentence.⁵¹ More recently, however, these findings have been challenged by consistent evidence that prisoners rapidly adapt to incarceration.⁵² As with adaptation in other domains, incarceration typically results in substantial psychological distress upon imprisonment followed quickly by rapid gains in well-being and little further change throughout the term.⁵³

An early cross-sectional study compared inmates who had served one year of a long-term sentence with those who had served nine years of such a sentence.⁵⁴ The recently incarcerated offenders exhibited significantly higher levels of self-reported anxiety, depression, and psychosomatic illnesses than the longer serving inmates.⁵⁵ According to the authors:

These results suggest that the early period of incarceration is particularly stressful for long-term offenders as they

⁵⁰ F.T. Cullen et al., *Public Opinion About Punishment and Corrections*, 27 CRIME & JUSTICE: A REV. OF RES. 1, 2 (2000).

⁵¹ See DONALD CLEMMER, *THE PRISON COMMUNITY* 299 (1958).

⁵² See Frederick & Loewenstein, *supra* note 13, at 311-12. They write, "Although incarceration is *designed* to be unpleasant, most of the research on adjustment to prison life points to considerable adaptation following a difficult initial adjustment period." *Id.* at 311. For an early review of the literature, see Lee H. Bukstel & Peter R. Kilmann, *Psychological Effects of Imprisonment on Confined Individuals*, 88 PSYCHOL. BULL. 469 (1980). The authors find no support for "the popular notion that correctional confinement is harmful to most individuals." *Id.* at 487.

⁵³ See Timothy J. Flanagan, *The Pains of Long-Term Imprisonment*, 20 BRIT. J. CRIMINOLOGY 148 (1980); Doris L. MacKenzie & Lynne Goodstein, *Long-term Incarceration Impacts and Characteristics of Long-term Offenders*, 12 CRIM. JUST. & BEHAV. 395 (1985); EDWARD ZAMBLE & FRANK J. PORPORINO, *COPING, BEHAVIOR, AND ADAPTATION IN PRISON INMATES* (1988) (hereinafter *COPING*); Edward Zamble & Frank Porporino, *Coping, Imprisonment, and Rehabilitation: Some Data and Their Implications*, 17 CRIM. JUST. & BEHAV. 53 (1990) (hereinafter *Coping & Rehabilitation*); Edward Zamble, *Behavior and Adaptation in Long-Term Prison Inmates: Descriptive Longitudinal Results*, 19 CRIM. JUST. & BEHAV. 409 (1992); Mandeep K. Dhimi et al., *Adaptation to Imprisonment: Indigenous or Imported?*, 34 CRIM. JUST. & BEHAV. 1085 (2007).

⁵⁴ See MacKenzie & Goodstein, *supra* note 53, at 401.

⁵⁵ *Id.* at 407.

make the transition from the outside world to institutional life. No evidence supports the notion of psychological deterioration over time. Instead, with more time served, long termers appear to develop strategies for coping with prison.⁵⁶

This evidence for adaptation to prison has been bolstered by longitudinal studies tracking inmates across prison terms.⁵⁷ One such study surveyed a group of prisoners regularly over six years. As in the cross-sectional studies, the researchers found that prisoners interviewed in their first month of incarceration showed high levels of depression and anxiety, but, within a few months, the prisoners' self-reported mental health had improved substantially.⁵⁸ Moreover, inmates' reports of their well-being also rose.⁵⁹ In interviews conducted during their first month in prison, inmates reported a mean quality of life (QoL) score of 32.2 out of 100, with more than two-thirds reporting their QoL below the midpoint of the scale.⁶⁰ After six months in prison, inmates' QoL reports rose to 38.3, and six years into their sentences, inmates had improved to 42.0, with most reporting their QoL above the scale's midpoint.⁶¹

From these studies a pattern of hedonic response to imprisonment emerges. Initial entry into the prison environment triggers significant psychological distress and low levels of well-being. Within weeks, however, inmates develop coping mechanisms that enable them to adjust to the situation and improve their well-being.⁶² After this initial adjustment period, offenders maintain

⁵⁶ *Id.* at 409.

⁵⁷ See ZAMBLE & PORPORINO, *COPING*, *supra* note 53; Dhami et al., *supra* note 53.

⁵⁸ See Zamble & Porporino, *Coping & Rehabilitation*, *supra* note 53, at 64; ZAMBLE & PORPORINO, *COPING*, *supra* note 53, at 109. They note that only "3 months later there was generally some amelioration of the emotional disturbances seen at the beginning of the term." *Id.*

⁵⁹ See Zamble, *supra* note 53, at 417.

⁶⁰ *Id.*

⁶¹ *Id.* The percentage of inmates reporting that "there are no good things" about being in prison also dropped over the six-year period from 48 to 8. *Id.* See also Dhami et al., *supra* note 53, at 1097 (noting, "prisoners with a poor quality of life before prison felt happier than before").

⁶² As early as the 16th century, Thomas More recognized prison's limited impact on his own well-being, writing, from his cell to his wife, "is not this house as nigh heaven as my own?" *Quoted in* ANTHONY KENNY & CHARLES KENNY, *LIFE*,

relatively constant levels of happiness throughout the remainder of their terms.⁶³ Thus, the “pains of imprisonment”⁶⁴ are felt immediately, with diminishing hedonic penalties over the remainder of the sentence.

D. *The Long-Term Effects of Prison on Well-Being*

Although *being in prison* seems to produce only limited hedonic deficits for inmates, it is becoming increasingly clear that *having been in prison*, for any length of time, has severe, long-lasting effects on post-incarceration well-being. Researchers have discovered that any amount of incarceration creates a significantly higher likelihood that ex-inmates will suffer a variety of health, economic, and social harms that will prove extremely difficult to adapt to.

Until very recently, it was widely believed that incarceration produced no direct, causal effects on ex-inmates’ health, employment, and family lives.⁶⁵ Any correlation between imprisonment and poor health or job prospects was thought to be the result of selection effects, i.e., the people who ended up in prison disproportionately came from groups with bad health and employment opportunities to begin with.⁶⁶ In the past few years, however, researchers hit on the idea of applying the same longitudinal surveys used to study well-being to track offenders in the years before and after imprisonment and thus isolate the effects of imprisonment itself.⁶⁷

LIBERTY, AND THE PURSUIT OF UTILITY: HAPPINESS IN PHILOSOPHICAL AND ECONOMIC THOUGHT, 59-60 (2006).

⁶³ There is, however, some evidence that the final few weeks of the sentence prove stressful and thus decreases well-being. See Bukstel & Kilmann, *supra* note 52, at 488. They write, “The typical pattern among these individuals might involve an initial adjustment reaction to incarceration, followed by a period of successful adjustment with another mild psychological reaction (e.g., ‘short-timer’s syndrome’) occurring just prior to release.” *Id.*

⁶⁴ See GRESHAM M. SYKES, *THE SOCIETY OF CAPTIVES: A STUDY OF A MAXIMUM SECURITY PRISON* (1958).

⁶⁵ See Jason Schnittker & Andrea John, *Enduring Stigma: The Long-Term Effects of Incarceration on Health*, 48 J. HEALTH & SOC. BEHAV. 115, 117 (2007) (noting that “the idea that incarceration is not causally related to health is already well accepted”).

⁶⁶ *Id.*

⁶⁷ See *id.*; BRUCE WESTERN, *PUNISHMENT AND INEQUALITY IN AMERICA* (2006) (tracking employment prospects and wage growth of ex-inmates); Michael Massoglia, *Incarceration as Exposure: The Prison, Infectious Disease, and Other Stress-Related Illnesses*, 49 J. HEALTH & SOC. BEHAV. 56 (2008) (studying health

Using data from the National Longitudinal Survey of Youth, Michael Massoglia has found that ex-inmates have a much higher likelihood of reporting health problems associated with stress and communicable diseases in the years following incarceration.⁶⁸ They are more than twice as likely to report hepatitis C infections, HIV/AIDS, tuberculosis, and urinary tract infections.⁶⁹ Moreover, they report substantially higher levels of chronic headaches, sleeping problems, dizziness, and heart problems.⁷⁰ Considering the high incidence of prison sexual violence⁷¹ and the many stressors associated with post-prison life,⁷² these results should not be surprising. What is surprising, however, is evidence from Massoglia and others that the incidence and severity of these health problems are unrelated to sentence length.⁷³ Thus, any contact with the prison system, no matter how brief, exposes offenders to worse post-incarceration health outcomes.

effects of imprisonment) (hereinafter *Exposure*); Michael Massoglia, *Incarceration, Health, and Racial Disparities in Health*, 42 L. & SOC. REV. 275 (2008) (the same) (hereinafter *Disparities*); Leonard M. Lopoo & Bruce Western, *Incarceration and the Formation and Stability of Marital Unions*, 67 J. MARRIAGE & FAM. 721 (2005). In the descriptions of these studies, it should be assumed unless otherwise stated that the results control for a variety of variables including age, gender, education level, health, etc. For specific control variables, please consult the individual studies.

⁶⁸ Massoglia, *Exposure*, *supra* note 67, at 57.

⁶⁹ Massoglia, *Disparities*, *supra* note 67, at 296.

⁷⁰ Massoglia, *Exposure*, *supra* note 67, at 65. It is worth noting, however, that imprisonment does not result in higher incidences of all health problems. *Id.*

⁷¹ See Tonisha R. Jones & Travis C. Pratt, *The Prevalence of Sexual Violence in Prison*, 52 Int. J. OF OFFENDER THERAPY & COMPAR. CRIMINOLOGY 280, 289 (2008). They write, “the research indicates that such studies typically report prison sexual victimization rates of around 20%, suggesting that prison sexual victimization is a significant problem to be addressed.” *Id.*

⁷² Massoglia notes, “the experience of incarceration likely acts as a primary stressor, while characteristics of life after release—stigma, decreased earnings and employment prospects, and family problems—are a series of secondary stressors.” Massoglia, *Exposure*, *supra* note 67, at 57.

⁷³ *Id.* at 61. According to Massoglia, “exposure to incarceration, rather than length of incarceration, appears to be more important to the relationship between incarceration and health problems.” *Id.* Schnittker and John’s findings concur: “[T]he effects of incarceration are such that contact with the prison system is generally more important than the amount.” Schnittker & John, *supra* note 65, at 125.

Studies examining ex-inmates' employment prospects report similar findings.⁷⁴ Felony imprisonment results in social stigma, the erosion of job skills, and disqualification from stable government and union jobs.⁷⁵ Accordingly, former prisoners experience lower wages, slower wage growth, and, importantly, greater unemployment. According to Bruce Western, their average annual number of weeks worked dropped from 35 before imprisonment to 23 after,⁷⁶ and they tended to have much shorter job tenure.⁷⁷ Additionally, imprisonment was related to poor employment continuity for many years after release.⁷⁸ After release, offenders are typically shunted into secondary labor markets with little job security, little opportunity for advancement, and miniscule earnings.⁷⁹

Recent research also reveals that ex-inmates are more likely to experience substantial disruptions in their post-incarceration family and social lives.⁸⁰ Imprisonment makes communication with family and friends difficult and cohabitation with spouses and children impossible.⁸¹ Moreover, imprisonment likely hinders community

⁷⁴ See WESTERN, *supra* note 67, at 116; Bruce Western et al., *The Labor Market Consequences of Incarceration*, 47 *Crime & Delinquency* 410 (2000); Jeffrey R. Kling, *Incarceration Length, Employment, and Earnings*, 96 *Am. Econ. Rev.* 863 (2006); see also DEVAH PAGER, *MARKED: RACE, CRIME, AND FINDING WORK IN AN ERA OF MASS INCARCERATION* (2007).

⁷⁵ See Western et al., *supra* note 74, at 412. They write, "incarceration can interrupt young men's transition to stable career employment. The inaccessibility of career jobs to ex-inmates can be explained in several ways. The stigma of incarceration makes ex-inmates unattractive for entry-level or union jobs that may require high levels of trust. In addition, civil disabilities limit ex-felons' access to career employment in skilled trades or the public sector. . . . Ex-offenders are then relegated to spot markets with little prospect for earnings growth." *Id.* at 414.

⁷⁶ WESTERN, *supra* note 67, at 116.

⁷⁷ *Id.* at 123.

⁷⁸ *Id.* at 121.

⁷⁹ Western compared hypothetical workers differing only regarding past imprisonment and found that a "thirty-year-old black high school dropout, for example, earns on average nearly \$9,000 annually, with incarceration resulting in a reduction of about \$3,300. The parallel white earnings average \$14,400, and the reduction about \$5,200." *Id.* at 120. He continues, "Without incarceration, 4 percent of young blacks—one-fifth of all poor blacks—would be lifted out of poverty, and the poverty rate would fall to 14.5 percent." *Id.* at 127.

⁸⁰ See *id.* at 146-47; Lopoo & Western, *supra* note 67; Beth M. Huebner, *The Effect of Incarceration on Marriage and Work Over the Life Course*, 22 *JUST. Q.* 281 (2005).

⁸¹ See Schnittker & John, *supra* note 65, at 117.

integration, trust, and intimacy.⁸² Accordingly, men who have spent time in prison are less likely to get married than similar men who have not, and they are more than twice as likely to get divorced than their never-incarcerated peers.⁸³

As bad as these health, employment, and social consequences of imprisonment seem, there would seem to be little reason to be concerned about them in light of humans' uncanny ability to adapt hedonically. But as mentioned above, certain experiences are difficult or impossible to adapt to and cause long-lasting diminutions in well-being. The effects of imprisonment—chronic and deteriorating illness, unemployment, and the loss of family and social ties—have all been found to be particularly resistant to adaptation.

The health problems that imprisonment exposes inmates to, including chronic headaches, hepatitis C, HIV, and tuberculosis, significantly and consistently diminish self-reported quality of life in sufferers, even with treatment.⁸⁴ People who become unemployed end up with lower baseline levels of happiness, and these decreases last even after they find new jobs.⁸⁵ Additionally, longer terms of unemployment result in more intense well-being penalties.⁸⁶ And although economic losses above the poverty line generally do not cause significant changes in well-being, many ex-inmates are likely to

⁸² *Id.*

⁸³ See WESTERN, *supra* note 67, at 146-48.

⁸⁴ See Guitera et al., *supra* note 27, at 1062; Tsui et al., *supra* note 31, at 603; Hays et al., *supra* note 30, at 714.

⁸⁵ See Richard A. Lucas et al., *Unemployment Alters the Set Point for Life Satisfaction*, 15 PSYCHOL. SCI. 8, 11 (2004); Richard A. Lucas, *Adaptation and the Set-Point Model of Subjective Well-Being*, 16 CURRENT DIRECTIONS IN PSYCHOL. SCI. 75, 77 (2007); Andrew E. Clark et al., *Lags and Leads in Life Satisfaction: A Test of the Baseline Hypothesis*, 118 ECON. J. F222, F231 (2008); Michael Argyle, *Causes and Correlates of Happiness*, in WELL-BEING, *supra* note 4, at 362-63. Lucas et al. write:

The experience of unemployment did, on average, alter people's set-point levels of life satisfaction. People were less satisfied in the years following unemployment than they were before unemployment, and this decline occurred even though individuals eventually regained employment. Furthermore, the changes from baseline were very stable from the reaction period to the adaptation period—individuals who experienced a large drop in satisfaction during unemployment were very likely to be far from baseline many years after becoming reemployed.

Lucas et al., *supra*, at 11. Or as Clark et al. put it, "unemployment starts off bad and pretty much stays bad." Clark et al., *supra*, at F231.

⁸⁶ See Lucas et al., *supra* note 85, at 10.

find themselves in the lowest part of the income curve where wage differences matter.⁸⁷

Imprisonment's impact on ex-inmates' family and social lives is likely to have the most severe consequences for well-being due to its multiple effects. First, the increased likelihood of divorce will have direct effects on well-being, because adaptation to divorce is often slow and incomplete.⁸⁸ Additionally, strong social and family ties have been shown to encourage adaptation,⁸⁹ and the disruptions inflicted by incarceration will be deleterious to a prisoner's ability to adapt to other negative events.⁹⁰ Finally, a variety of learned behaviors that enable inmates to cope with the experience of incarceration, including mistrust, blunted emotions, and lack of planning, are likely to prove maladaptive "on the outside."⁹¹

In the years following release from prison, ex-inmates are likely to suffer from a variety of problems that cause long-lasting diminution of their well-being. Working alone or in tandem, the negative health, employment, and social effects of imprisonment have severe consequences for lifelong happiness independent of the length of a prisoner's incarceration. Although offenders are capable of rapidly adapting to being in prison, they have little hope of adapting to the penalties prison imposes on their health, work, and family lives.

* * *

⁸⁷ See WESTERN, *supra* note 67, at 127.

⁸⁸ See Richard A. Lucas, *Time Does Not Heal All Wounds: A Longitudinal Study of Reaction and Adaptation to Divorce*, 16 PSYCHOL. SCI. 945 (2005); David R. Johnson & Jian Wu, *An Empirical Test of Crisis, Social Selection, and Role Explanations of the Relationship Between Marital Disruption and Psychological Distress: A Pooled Time-Series Analysis of Four-Wave Panel Data*, 64 J. MARRIAGE & FAM. 211 (2002).

⁸⁹ See, e.g., Argyle, *supra* note 85, at 363 (noting that the "effects of unemployment are greater if there is little social support").

⁹⁰ See Frederick & Loewenstein, *supra* note 13, at 314-15.

⁹¹ See Schnittker & John, *supra* note 65, at 126-27. They write:

For example, relinquishing initiative and relying on external constraints may be rewarded in a prison setting, but these characteristics can be problematic in a home or workplace. By the same token, vigilance, mistrust, and blunted emotions might help prisoners to cope with an especially violent environment. These dispositions might also, however, elevate risk for cardiovascular disease and other stress-related illnesses.

Id. at 126; see also Zamble & Porporino, *Coping & Rehabilitation*, *supra* note 53, at 68.

Contemporary punishment theories all require knowledge of the offender's subjective experience of punishment, but until very recently, scientific data on punishment's effects was unavailable. New research can now provide some of that data, and recent findings challenge fundamental intuitions about how punishment inflicts suffering. Central to this research is the phenomenon of hedonic adaptation. Many life events, including economic losses and time spent incarcerated, produce only fleeting impacts on reported happiness. Moreover, due to the rapidity and strength of adaptation, even substantial differences in the sizes of penalties, whether larger fines or longer prison terms, fail to generate significantly different hedonic effects. Yet while inmates quickly adjust to being in prison, incarceration causes a variety of long-term consequences that are resistant to hedonic adaptation and that are unrelated to sentence length. Thus, the hedonic impact of all fines is relatively equal and smaller than predicted, and the impact of all terms of imprisonment is relatively equal and big but not in the way imagined.

II. ADAPTATION, FORECASTING ERRORS, AND ASYMMETRY IN UTILITARIAN CALCULATIONS OF PUNISHMENT

In this Part, we apply the foregoing research on hedonism and hedonic adaptation to utilitarian theories of punishment. We find that adaptation to imprisonment itself may enable deterrence at a lower utilitarian cost than was previously believed possible. At the same time, however, the hedonic effects of incarceration on post-prison life may produce the opposite effect. The social and economic dislocations caused by felony convictions may be imposing hedonically excessive punishments while simultaneously inhibiting efforts to appropriately calibrate deterrence of both first-time offenders and recidivists.

A. Utilitarian Theory and the Linkage of Deterrence and Pain

The goal of utilitarianism, in the words of its founder, Jeremy Bentham, "is to augment the total happiness of the community; and therefore, in the first place to exclude, as far as may be, every thing

that tends to subtract from that happiness.”⁹² In designing and analyzing systems of criminal punishment, utilitarian theorists are thus primarily concerned with achieving adequate and effective deterrence—of setting punishment at a level sufficiently high to dissuade potential offenders from committing crime.⁹³ Among utilitarians, the temptation to impose increasingly harsher penalties is strong and omnipresent. The optimal social frequency of most crimes is exactly zero; the country would likely be better off if there were no murders, no armed robberies, no assaults, and so forth.⁹⁴ This is by

⁹² Jeremy Bentham, *An Introduction to the Principles of Morals and Legislation*, in JEREMY BENTHAM & JOHN STUART MILL, *THE UTILITARIANS* 162, 166 (1961).

⁹³ Jeremy Bentham, *Principles of Penal Law*, Pt. II, bk. 1, ch. 3, in J. BENTHAM’S WORKS 396, 402 (1843) (“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.”); HOLMES-LASKI LETTERS 806 (1953) (“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.”). Utilitarians have focused in addition on two other related objectives, incapacitation of dangerous persons and rehabilitation of criminals in order to render them suitable to re-enter society. These goals of punishment have crept out of favor, however, as prisons have proven to be poor vehicles for reforming offenders, Robert Martinson, *What Works?—Questions and Answers About Prison Reform*, 36 PUB. INT. 22 (1974) (arguing that rehabilitative efforts have failed to accomplish their goals), and incapacitation has had little noticeable effect on the rates of serious crimes. FRANKLIN ZIMRING & GORDON HAWKINS, *INCAPACITATION* 100–27 (1995) (finding that increased incarceration rates in California led to a 15% decrease in overall crime rates but did not influence the rates of violent crimes such as assaults, robberies, and murders); John J. DiIulio, Jr., *Two Million Prisoners Are Enough*, WALL STREET JOURNAL, March 12, 1999. Rehabilitation and incapacitation also declined as working theories of punishment because they could offer no response to the critique that they seemed to compel excessive and indefinite punishment of even minor crimes. Herbert Morris, *Persons and Punishment*, 52 THE MONIST 475 (1968). We focus here upon deterrence, which remains the principal utilitarian goal of punishment. See, e.g., MODEL PENAL CODE § 1.02(2) (“The general purposes of the provisions governing the sentencing and treatment of offenders are: (a) to prevent the commission of offenses . . .”).

⁹⁴ We exploit here the definition of a “murder” or other type of crime. Obviously there are circumstances in which killings will be welfare-enhancing, but those justified killings are not properly classified as murder. By definition, “murder” includes only unjustified killings. See MODEL PENAL CODE § 3.02(1) (“Conduct which the actor believes to be necessary to avoid a harm or evil to himself or to another is justifiable . . .”).

contrast to the civil tort context, where the threat of over-deterrence is a persistent problem.⁹⁵ (Imagine the economic damage if the punishment for causing a car accident were set at \$1 million and people ceased driving.) Because most crimes must be intentional, and because the majority of them deviate so strongly from acceptable norms of conduct—robbery and assault do not resemble socially permitted conduct, while negligent driving at least bears a resemblance to safe driving—there is less fear that some socially productive activity will be chilled through stiff penalties on crime.

Rather, from a utilitarian perspective, the most significant check on the degree of punishment is the cost associated with the punishment itself.⁹⁶ Part of that cost derives from the public expense of detecting, trying, and imprisoning a criminal,⁹⁷ and part of it relates to the opportunity cost of removing individuals from the workforce and transferring them to comparatively unproductive confinement.⁹⁸ For present purposes, however, the most important component of these costs is the pain inflicted upon the criminal himself.⁹⁹ For a strict utilitarian, the criminal's welfare is part of the overall calculus:¹⁰⁰ the

⁹⁵ See generally RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 167–71 (2007) (describing the theory of optimal tort damages).

⁹⁶ See Richard S. Frase, *Punishment Purposes*, 58 STAN. L. REV. 67, 68 (2005) (explaining that most modern systems set punishment “not only [by reference to] traditional crime-control purposes such as deterrence, incapacitation, and rehabilitation, but also a concept known as parsimony—a preference for the least severe alternative that will achieve the purposes of the sentence”). A second important consideration is the need to achieve marginal deterrence; we address this point in greater detail in section II.C., *infra*.

⁹⁷ See Steven D. Levitt, *The Effect of Prison Population Size on Crime Rates: Evidence from Prison Overcrowding Litigation*, 111 Q.J. ECON. 319 (1996) (analyzing the cost to taxpayers of incarceration).

⁹⁸ See Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169, 193 (1968) (“[I]n the United States in 1965, about \$1 billion was spent on ‘correction,’ and this estimate excludes, of course, the value of the loss in offenders’ time.”).

⁹⁹ We employ the feminine pronoun here because it is our preferred convention, despite the fact that the vast majority of prisoners are male and the behavioral studies we discuss employed only male subjects.

¹⁰⁰ Louis Michael Seidman, *Soldiers, Martyrs, and Criminals*, 94 YALE L.J. 315, 320 (1984) (“Traditionally, utilitarians have begun with the premise that the criminal justice system should minimize the sum of the costs of crime and crime prevention. Since everyone's welfare is included in the social calculus, the cost of crime prevention includes . . . also the suffering imposed upon criminals made to undergo punishment.”); Margery Fry, *Bentham and English Penal Reform*, in JEREMY BENTHAM AND THE LAW 28 (1948) (“the suffering of a punished criminal

utilitarian goal is to increase the overall welfare of society, and the criminal, despite her deviance from societal norms, remains a part of that society.

Accordingly, deterrence and social cost have typically been thought to move in a type of proportionate lock-step. The greater the deterrence effect desired, the greater the necessary punishment; but as punishment (and consequently deterrence) increases, so too does the social price paid to purchase that deterrence. Utilitarian legislators who draft sentencing codes, and utilitarian judges who impose sentences, are thus forced to come to some sort of accommodation between the twin goals of achieving deterrence and of lessening the social price paid for punishment, and much of the struggle in setting appropriate levels of punishment centers around this difficult question of balancing.¹⁰¹

Utilitarian theorists have heretofore assumed that the deterrent “punch” of punishment was equal to the pain that punishment inflicted upon an offender, and that, fundamentally, deterrence could not be uncoupled from its utilitarian cost. If a lawmaker or judge wished to obtain additional deterrence power by increasing the punishment for some crime, she could not avoid the cost of imposing it upon the criminals who broke the law regardless. The utilitarian pain inflicted by punishment was, by this accounting, the necessary purchase price of deterrence. Yet new theories of hedonic adaptation cast doubt upon this formerly immutable principle.

goes duly down on the debit side, and must be balanced by some greater good in the credit column”); Levitt, *supra* note 97, at 347 (acknowledging that typical studies may underestimate the costs of incarceration because of the unacknowledged “pain and suffering of prisoners and their families”); R. B. Brandt, *Conscience (Rule) Utilitarianism and the Criminal Law*, 14 L. & PHILOSOPHY, 65, 73 (1995) (referencing “harm to . . . convicted criminals”); Carl Emigholz, *Note, Utilitarianism, Retributivism and the White Collar-Drug Crime Sentencing Disparity: Toward a Unified Theory of Enforcement*, 58 RUTGERS L. REV. 583, 599 (2006) (“In the utilitarian calculus, the criminal justice system implicates a negative social cost: the crime . . . and pain inflicted upon the criminal as a result of the meted punishment.”).

¹⁰¹ Compare MODEL PENAL CODE § 1.02(2)(a) (listing “to prevent the commission of offenses” as the first purpose of the Code sections governing punishment) *with id.* § 1.02(2)(c) (stating that the third purpose of the same sections is “to safeguard offenders against *excessive*, disproportionate or arbitrary punishment”) (emphasis added).

B. Deterrence, Cost, and Adaptation to Punishment

As we discuss in Part I, new evidence regarding hedonic adaptation gives rise to strong inferences that people will adapt over time to criminal punishment, whether that punishment takes the form of a monetary penalty or a prison sentence. That is to say, the convicted criminal's felt experience of punishment will diminish in severity over time: both the prisoner and the recipient of a fine will be happier one year after the punishment is imposed than she was after one day, even if the prisoner remains behind bars and irrespective of whether the fined criminal has recovered any of the lost funds.¹⁰²

This adaptation, and the forecasting errors that accompany it, sever the close linkage between the deterrent power of punishment and its cost. Regardless of the duration of punishment, criminals will feel it less harshly than they (or anyone else) expected. At the same time, they will fail to anticipate their own adaptation, even if they are repeat offenders who have been punished before.¹⁰³ Indeed, criminals and the people who sanction them—juries, judges, and legislators—will make the same *ex ante* errors in failing to forecast adaptation. Deterrence is, of course, an *ex ante* phenomenon—putative criminals decide which course of action to pursue based upon their expected outcomes. Consequently, criminals will be deterred to the same extent that they would be in the absence of adaptation. Punishment will serve its primary purpose, but at lower cost than anyone had anticipated.

1. Total Pain

When deciding upon a punishment, policymakers—the legislators who design the system of punishment and set its metes and bounds, and the judges who impose punishment—must consider the effect of that punishment upon the criminal herself. From a consequentialist perspective, the harm inflicted upon the criminal serves as a type of check on the appropriate severity of a sentence and a cost to be minimized wherever possible.¹⁰⁴ A policymaker imposing

¹⁰² See *supra* notes 42–64 and accompanying text.

¹⁰³ See Wilson & Gilbert, *Affective Forecasting*, *supra* note 35; Ubel, *supra* note 36, at 111; Gilbert & Wilson, *Prospection*, *supra* note 37.

¹⁰⁴ See, e.g., 18 U.S.C. § 3553(a) (2008) (“The court shall impose a sentence sufficient, but not greater than necessary”); Model Penal Code § 1.02(2) (“The

a sentence necessarily must believe that she can anticipate—within reasonable bounds—the severity of that sentence and the pain that it will inflict. (Sentencing would otherwise constitute an entirely random exercise.) One component of that predictability is the assumption that the severity of a sentence will scale approximately proportionately to its length or, in the case of a fine, its amount.

Adaptation uproots this assumption. As we describe above, people suffer from biases when predicting both the intensity and the duration of punishment. They will believe it to be worse than it truly is, even initially, and they will anticipate that it will last longer than it does in fact.¹⁰⁵ Thus, prison and punitive fines will impose smaller hedonic costs upon their recipients than expected, and those costs will ameliorate over time; two years in prison are not twice as painful as one year. As prisoners adapt, they likely return to hedonic states that more closely resemble their pre-prison experiences.

As a consequence, policymakers' forecasting errors (coupled with prisoners' adaptation) introduce a systematic bias into their estimations of the effect of punishment. Punishment—whether by fine or by imprisonment—is simply not as painful as they believe or predict. In section II.B.2 below we discuss the potential negative ramifications of this bias, but for the moment we note only its beneficial impact: *any given punishment imposes less pain upon the recipient and exacts a smaller utilitarian cost than previously believed.* For a consequentialist, this promises a meaningful improvement over the perceived status quo.

2. Deterrence

The usual corollary to this decreasing punishment would be a concomitant diminishment in its deterrent power—a negative repercussion by nearly any accounting. But here there exists an important asymmetry between deterrence and the felt experience of punishment. A proper accounting of punishment's hedonic cost can be made only *ex post*—after the punishment has already been administered. Hedonic adaptation will lessen the impact of that

general purposes of the provisions governing the sentencing and treatment of offenders are: . . . (c) to safeguard offenders against excessive, disproportionate or arbitrary punishment"); *supra* note 100 and accompanying text.

¹⁰⁵ Wilson & Gilbert, *Affective Forecasting*, *supra* note 35.

punishment over time, and so this ex post accounting will necessarily include the ameliorating effects of that adaptation.

Deterrence, on the other hand, is an ex ante phenomenon: the important issue is what punishment the prospective criminal *believes* she will suffer if she is caught and punished, not the punishment that she eventually receives.¹⁰⁶ In the ex ante position, the criminal will not anticipate her adaptation to punishment. Quite to the contrary, she will be subject to a focusing illusion as to that punishment's severity; her expectation of the punishment will far exceed what she will, in fact, experience.¹⁰⁷ At the same time, the policymakers charged with meting out punishments—legislators, judges, and juries—will be subject to the same focusing illusions. They will similarly fail to anticipate the criminal's adaptation, and they will imagine a punishment to be harsher than it actually is. Criminals and the people charged with punishing them may differ in their evaluations of punishment on other grounds—criminals may have higher discount rates than policymakers expect,¹⁰⁸ or they may have more information as to the conditions of confinement¹⁰⁹—but along the dimension of

¹⁰⁶ Our account in this respect differs from the very interesting points made by Paul H. Robinson & John M. Darley, *Does Criminal Law Deter? A Behavioral Science Investigation*, 24 OXFORD J. LEG. STUD. 173, 188–89 (2004). Robinson and Darley suggest in passing that adaptation to prison will inhibit deterrence, *id.*, but they do not account for the fact that putative criminals will evaluate whether or not to commit a crime before they have been incarcerated, and thus before they learn that they will adapt. In addition, even potential recidivists will forget about their own adaptation once they have been released; without this learning, they will be subject to the full deterrence force of threatened punishment each subsequent time they contemplate a crime. See *infra* notes 111–112 and accompanying text.

¹⁰⁷ Gilbert & Wilson, *Prospection*, *supra* note 37.

¹⁰⁸ That is to say, by comparison to the general population, criminals may weight the present far more heavily than the future when deciding upon a course of action. See generally JAMES Q. WILSON & RICHARD HERRNSTEIN, *CRIME AND HUMAN NATURE* (1985); see also David S. Lee & Justin McCrary, *Crime, Punishment, and Myopia* 4, 30 (unpublished manuscript 2005), available at <http://www.columbia.edu/~wbm2103/?Courses/Papers-SLEPP/Lee-NBER-11491.pdf> (demonstrating that hyperbolic discount is more common among criminals than the general population); Christine Jolls et al., *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471, 1539–40 (1998). See also David Laibson, *Golden Eggs and Hyperbolic Discounting*, 112 Q.J. ECON. 443, 445–46 (1997).

¹⁰⁹ See Ascanio Piomelli, *Foucault's Approach to Power: Its Allure and Limits for Professional Lawyering*, 2004 UTAH L. REV. 395, 470 n.346 (2004) (noting prisoners' first-hand information regarding the conditions of confinement); Daniel M. Donovan, Jr., *Note: Constitutionality of Regulations Restricting Prisoner*

hedonic forecasting they will behave similarly.¹¹⁰ Hedonic adaptation thus introduces not an interpersonal asymmetry, but an intertemporal one: criminals may experience punishment differently than they anticipated at an earlier point in time, but different people forecasting the impact of punishment at the same moment will reach similar conclusions.

This felicitous asymmetry is threatened, however, by the prospect that recidivist criminals might learn from their past experiences. Having once experienced punishment (and the attendant adaptation), the criminal might understand that she will learn to accommodate the punishment she receives and that the initial shock of being thrown into prison or fined a large amount will soon dissipate. Such information, in the hands of repeat offenders, would diminish the deterrent power of punishment, perhaps substantially. Yet remarkably this learning does not take place, as we note above.¹¹¹ People, as a general rule, do not remember their adaptive responses to negative stimuli.¹¹² They report their experiences to others as having been worse than they really were, and they do not draw upon their experiences to make more accurate predictions on subsequent occasions. Because they do not learn, they cannot disseminate any information about adaptation effects to the broader community, which remains similarly ignorant. The consequence is that affective forecasting errors are remarkably consistent over time: having overestimated the harshness of prison once, people are likely to do so again, and to similar degree. The intertemporal asymmetry introduced by adaptation is resistant to even a particular individual's life experience.

Correspondence with the Media, 56 *FORDHAM L. REV.* 1151, 1166 (1991) (describing the informational value of prisoners' letters from prison).

¹¹⁰ No study has yet observed any differences in how various groups of people experience adaptation or forecast their future happiness. See, e.g., Nick Sevdalis & Nigel Harvey, *Predicting Preferences: A Neglected Aspect of Shared Decision-Making*, 9 *HEALTH EXPECTATIONS* 245, 248 (2006) (finding no evidence that "doctors are better equipped than their patients to judge the latter's future 'best interests'"). This is not to say that such differences cannot exist—and these conclusions are certainly tentative, pending future research—but at the moment there is no reason to believe that they do.

¹¹¹ Ayton et al., *supra* note 39.

¹¹² Wilson et al., *Lessons From the Past*, *supra* note 41, at 1649.

3. Adaptation Effects in Combination

Viewed side-by-side, these two consequences of adaptation—that people adapt but fail to anticipate their adaptation—have significant ramifications for utilitarian theories of punishment. Adaptation severs the linkage between deterrence and the pain inflicted upon a criminal: policymakers are able to achieve adequate deterrence at a lower cost than was believed possible. As a result, consequentialist calculations of the costs of punishment have been skewed upwards. A proper cost-benefit accounting of various forms and methods of punishment—be they monetary fines or terms of imprisonment—must include the power of adaptation to lessen the burden of punishment as the criminal experiences it, while simultaneously obscuring that anticipated advantage from the criminal both before and after the fact. For the utilitarian punishment theorist, hedonic adaptation appears to represent an essentially unalloyed good.

C. *The Post Hoc Effects of Confinement*

The previous sections were concerned only with the effects of adaptation upon a criminal's felt reaction to a particular punishment itself—i.e., the criminal's experience while in prison or in coping with a punitive fine. With respect to imprisonment, however, the hedonic impact of punishment does not conclude when the prisoner is released. A convicted felon feels the lingering after-effects of imprisonment in nearly every area of her life, ranging from legal, to social, to economic. In many cases, these ongoing ramifications of imprisonment are not easily adaptable. Consequently, prison holds the capacity to impose hedonic harms beyond what a simple snapshot of life in prison would reveal.

The social and economic effects of having served time in prison can be extremely serious.¹¹³ As we outline in Part I, prisoners

¹¹³ A lengthy prison term—or, more accurately, the state of being a “convicted felon”—carries with it a number of legal deficiencies that time does not cure. Federal law prohibits anyone who has served more than one year in prison from possessing a firearm of any sort. 18 U.S.C. § 922(g)(1) (2008). Ten states currently prohibit convicted felons from voting even after they are no longer associated with the criminal justice system, while an additional ten states prevent felons from voting if they have been released on probation or parole. ProCon.org, *State Felon Voting Laws* (2007), available at <http://felonvoting.procon.org/viewresource.asp?resourceID=286>. Nonetheless, these

often witness the breakups of their marriages and relationships while in prison and have greater difficulty forming other relationships (including friendships) upon their release.¹¹⁴ They experience greater rates of unemployment.¹¹⁵ Ex-prisoners also suffer from more debilitating health problems and far higher rates of incurable diseases than the general population.¹¹⁶ And as we describe above, unlike the loss of money—or even permanent physical injuries¹¹⁷—these types of afflictions have severe long-term hedonic effects and are very difficult to adapt to. In particular, unemployment and the dissolution of social ties are two of the most reliable predictors of long-term unhappiness and anxiety.¹¹⁸ Measured against an individual's happiness before being caught and convicted, life after prison bears in many respects a greater resemblance to life *in* prison than it does to life *before* prison.

The ramifications of this deterioration of post-prison life are two-fold. First, it raises the possibility that consequentialist calculations of the costs of punishment may again be biased—downward, this time. Any cost-benefit analysis of punishment that terminates when the criminal is released from prison would understate the negative effects that begin or endure after the prison term has finished.¹¹⁹ It is worth noting that these negative effects do not accrue only to the former prisoner. Individual unemployment and social dislocation impose significant negative externalities upon the rest of society; the former prisoner frequently must be supported by state aid and is more likely to commit further crimes.¹²⁰

penalties are unlikely to have any significant hedonic effects. No study has shown any hedonic impact from the loss of a capacity as circumscribed as the right to carry a gun or to vote, and it seems implausible that the loss of such rights would register hedonically on nearly the same magnitude as far more significant life events such as births, deaths, illness, or financial shocks.

¹¹⁴ See *supra* notes 74–79 and accompanying text.

¹¹⁵ See *supra* notes 80–83 and accompanying text.

¹¹⁶ See Massoglia, *supra* note 67, at 57 & 296.

¹¹⁷ See Bronsteen, Buccafusco, & Masur, *supra* note 2 (describing adaptation to certain types of debilitating physical injuries).

¹¹⁸ See *supra* notes 88–91 and accompanying text.

¹¹⁹ See Levitt, *supra* note 97, at 346–47 (cataloguing a variety of prior studies that fail to incorporate the post hoc costs of imprisonment to the prisoner); Becker, *supra* note 98, at 179–80 (limiting discussion of the costs of punishment to those incurred while the punishment is ongoing).

¹²⁰ WESTERN, *supra* note 67 (finding strong effects of prison on unemployment and future life prospects, including a 30% diminution in wages and an 11% decline in the probability of getting married for African-American men); NEAL SHOVER, *GREAT PRETENDERS: PURSUITS AND CAREERS OF PERSISTENT THIEVES* 146 (1996)

Second, the harsh impact of imprisonment on post-prison life has uncertain but possibly damaging consequences for efforts to set deterrence levels accurately. The initial problem, of course, is that prison sentences exact a much greater toll than their term of years. The question, then, is which actors within the criminal justice system realize this fact *ex ante*, when the question of deterrence is relevant. It is hard to be certain about the minds of the legislators who draft sentencing codes, the judges who impose sentence, and especially the putative criminals who contemplate committing illegal acts. Reliable studies of this subject simply do not exist, perhaps because its hedonic significance has not yet been fully appreciated.

In many cases, however, the silence is deafening. No sentencing code directs judges to take account of the *post hoc* effects of the punishments they are considering imposing.¹²¹ The public record is similarly devoid of indications that politicians are concerned about the lingering effects of prison upon convicted criminals.¹²²

For potential offenders, the picture may not be quite so clear. Criminals discount the future so strongly that some scholars believe that even increasing prison terms beyond ten or twenty years provides little additional deterrence.¹²³ On the other hand, at least one study has demonstrated that punitive measures that affect only life *after* prison—in this case, laws that force convicted sex offenders to notify local

(“Most ex-convicts live menial or derelict lives and many die early of alcoholism or drug use, or by suicide.”); Dermot Sullivan, *Employee Violence, Negligent Hiring, and Criminal Records Checks: New York’s Need to Reevaluate its Priorities to Promote Public Safety*, 72 ST. JOHN’S L. REV. 581, 596 (1998) (noting the connection between unemployment and recidivism).

¹²¹ See, e.g., 18 U.S.C. § 3553(a) (2008) (directing federal judges to consider a host of factors when imposing sentence, none of which relates to the prisoner’s post-correctional experience).

¹²² The lone counter-example may be the treatment of juvenile offenders, who have the opportunity to expunge convictions from their records in many states. See T. Markus Funk, *A Mere Youthful Indiscretion? Reexamining the Policy of Expunging Juvenile Delinquency Records*, 29 U. MICH. J.L. REFORM 885, 887 n.9 (1996) (collecting state statutes allowing for expungement of juvenile records). Of course, the simple fact that a criminal record has been expunged will by no means ameliorate all of the negative after-effects of prison, which are due as much to the social separation imposed by prison as to the legal status of being a convicted felon. See *supra* notes 80–83 and accompanying text.

¹²³ See generally WILSON & HERRNSTEIN, *supra* note 108 (describing the extremely high discount rates of criminals and their effects on deterrence); see also *infra* note 130 (approaching this question from the perspective of adaptation and the post-hoc effects of imprisonment).

residents when they are released from prison¹²⁴—have demonstrably positive effects on deterrence.¹²⁵ For at least one population of potential criminals, then, the post-prison effects of incarceration play a meaningful role in ex ante decision-making.

This finding raises the implication that legislators and judges—through their failure to consider the significant hedonic effects of prison on post-prison life—have been systematically underestimating the deterrent effect of prison sentences. Prospective criminals may be figuring post hoc effects of imprisonment into the deterrent calculus; policymakers almost surely are not. Policymakers thus may be over-punishing, failing to calibrate sentences accurately to achieve necessary deterrence at the lowest possible hedonic cost.

Moreover, the straightforward problems with accuracy aside, the manner in which the effects of punishment are actually felt greatly complicates efforts to calibrate penalties to crimes. The difficulty arises from the fact that much of the hedonic sanction involved in a jail term is effectively front-loaded. The negative post-prison repercussions of having served a prison term accrue to essentially any convicted felon: the differences in post-prison outcomes between felons who were incarcerated for shorter terms and those incarcerated for longer terms are minimal.¹²⁶ This implies that much of the pain associated with incarceration is fixed, unchangeable once a felon has served at least a few years behind bars. Consequently, for instance, a two-year prison sentence is much more than fifty percent as punitive as a four-year sentence.¹²⁷ Tacking additional years onto the end of a

¹²⁴ These laws were inspired by a New Jersey statute known as “Megan’s Law” (after the child victim who inspired its passage). N.J.S. 2C:7-1 et seq. (2008). There is now a federal mandate requiring every state to pass similar legislation. 42 U.S.C. § 14071(d)(2) (2008) (“The State or any agency authorized by the State shall release relevant information that is necessary to protect the public concerning a specific person required to register under this section The release of information under this paragraph shall include the maintenance of an Internet site containing such information that is available to the public . . .”).

¹²⁵ J.J. Prescott & Jonah E. Rockoff, *Do Sex Offender Registration and Notification Laws Affect Criminal Behavior?* (unpublished manuscript 2008), available at <http://ssrn.com/abstract=1100663>, at 23–26 (finding that offender notification laws reduced first-time commissions of crimes).

¹²⁶ Massoglia, *supra* note 67, at 61; Schnittker & John, *supra* note 65, at 125 (“contact with the prison system is generally more important than the amount”).

¹²⁷ This is true irrespective of criminals’ high discount rates, about which see *supra* note 108. Precipitous discounting will cause criminals to view a four year

prison sentence will alter the overall punitive calculation less than intuition would suggest, particularly because the same years that convicted criminals would have spent outside of prison (but, with longer sentences, will now spend inside) would likely have been unhappy ones.

This front-loading severely complicates efforts to achieve marginal deterrence against first-time offenders. Any system of punishment must impose heavier penalties for more serious crimes in order to coerce criminals into committing less serious crimes whenever possible.¹²⁸ For instance, if burglary, armed robbery, and murder were all punishable by life in prison, potential burglars might elect to commit the more serious crime of armed robbery instead, calculating that they have little to lose; similarly, burglars who were in danger of being apprehended might not hesitate to commit murder. If a significant proportion of the hedonic punishment for a crime attaches after a single year in prison, and if potential offenders take the post-prison ramifications of punishment into consideration when deciding whether to commit a crime (a plausible assumption¹²⁹), then the variation in deterrence among different punishments begins to disintegrate.¹³⁰

The hedonic impact of post-prison punishment will also interfere with the deterrence of recidivists, though not because they possess any capacity to learn from their experiences. Rather, felons

sentence as less than half as harsh as a two year sentence; the post-prison hedonic costs of incarceration will have a similar (and compounding) effect.

¹²⁸ E.g., Eyal Zadir & Barak Medina, *Law, Morality, and Economics: Integrating Moral Constraints with Economic Analysis*, 96 CAL. L. REV. 323, 379 n.211 (2008); Bentham, *supra* note 92, at 168.

¹²⁹ See *supra* note 125 and accompanying text (finding evidence to support this hypothesis).

¹³⁰ That criminals have extremely high discount rates is now a commonplace. See *supra* note 108. Economists, however, remain divided as to the theory behind this criminal behavior, and no fully satisfying explanation has yet emerged. Our argument, if it is correct, suggests the possibility that some behavior previously explained through high discount rates may in fact be attributable to other causes. Instead, offenders may be responding rationally to the front-loading of punishment in jail sentences, understanding that much of the hedonic cost of being imprisoned will accrue whether they are forced to serve two years or ten. (This would, however, only apply to first-time criminals; recidivists, having been imprisoned once, will have already been afflicted with most of the negative effects of having served time.) This theory is, of course, highly contingent and highly tentative, but it raises questions about prior assumptions regarding the level of information possessed by first-time offenders.

who have been convicted and imprisoned at least once already face severely diminished happiness outside of prison due to the social and economic dislocations caused by their prior stints behind bars. When they contemplate whether to commit further crimes, they must weigh the hedonic consequences of prison against their devalued post-conviction lives, not their happier pre-prison lives. If putative offenders have less to lose by being sent to jail, they will be more likely to select crime over law-abiding behavior.

Of course, it is not news that convicted criminals face reduced opportunities—particularly economic—after release from prison and are more likely to opt for criminal activity as a result.¹³¹ To this well-tread territory our analysis contributes two salient components. First, these post-prison deprivations impose some of the most serious hedonic injuries possible; few things are as debilitating to hedonic well-being as unemployment and the breakup of social ties.¹³² And second, these hedonic effects will persist; the conditions of being unemployed or deprived of social ties are extremely difficult to adapt to.¹³³ The reduced opportunity costs that give rise to repeat offending are unlikely to dissipate; more likely, they will persist throughout much of the remainder of the criminal's life. Thus, while adaptation to *punishment itself* offers the promise of appropriate deterrence at a reduced price, the *post-prison cost* of imprisonment threatens to reverse that same calculation, heightening pain while inhibiting its ability to deter.

* * *

For utilitarian theorists of punishment, hedonic adaptation offers a mixed set of solutions and new problems. Adaptation loosens

¹³¹ For a small sampling of this extensive literature (here applied to sex offenders), see Prescott & Rockoff, *supra* note 125, at 27–28 (finding that reduced opportunities after conviction lead to greater rates of recidivism); W. Edwards & C. Hensley, *Contextualizing Sex Offender Management Legislation and Policy: Evaluating the Problem of Latent Consequences in Community Notification Laws*, 45 INT'L J. OF OFFENDER THERAPY & COMP. CRIM. 83 (2001) (same); L. Presser & E. Gunnison, *Strange Bedfellows: Is Sex Offender Notification a Form of Community Justice?*, 45 CRIME & DELINQUENCY 299 (1999) (same); R.A. Prentky, *Community Notification and Constructive Risk Reduction*, 11 J. OF INTERPERSONAL VIOLENCE 295 (1996) (same).

¹³² See *supra* notes 68–73 and accompanying text.

¹³³ See *supra* notes 84–87 and accompanying text.

the link between deterrence and harm, suggesting that policymakers will be able to achieve adequate deterrence while inflicting less pain upon criminals. At the same time, the devastating hedonic effects of incarceration upon post-prison life may have the opposite effect. Punishment may well be more severe than any policymaker realizes, and the ongoing nature of this punishment may skew both marginal deterrence (as applied to first-time offenders) and overall deterrence (as applied to recidivists).

However, these forces will not counterbalance. For most criminals, the post-prison hedonic costs imposed by incarceration will likely overwhelm the benefits of adaptation to prison simply because they endure for much longer. Difficulties with deterrence introduced by front-loaded punishment will only compound the problem. If lawmakers and judges are to establish a workable punitive system, they must find some means of circumventing the distortions introduced by hedonic adaptation (and its absence).

IV. RETRIBUTIVE AND MIXED THEORIES

Most scholars today do not deem punishment justified solely by its capacity to increase overall welfare. Instead, they focus at least in part on the idea that a criminal *deserves* to be punished. This retributive principle is for some the entire justification of punishment and for others a supplement to or a limitation on the pursuit of utilitarian objectives.

For a retributivist of any stripe, it is of core importance to understand the actual amount of harm that punishment inflicts. The retributive theory supplanted utilitarianism principally by emphasizing that it is unacceptable to punish the innocent or to punish excessively the guilty, even if doing so would increase utility. A cornerstone of retributivism is thus that the state may impose suffering only on those who deserve it (criminal offenders) and only in an amount that they deserve (proportional to the severity of their wrongdoing). For most retributivists, imposing deserved punishment is not only permissible but also required. Imposing too much harm for a minor crime is unacceptable under the theory, as is imposing too little harm for a major crime. It would be wrong, on the retributivist account, to allow a murderer to go unpunished or to give him an insufficiently severe punishment (such as a small fine). Therefore, *retribution can be implemented only via a spectrum of punishments that impose varying*

degrees of harm. The level of harm must be adjusted to accord with the offender's desert.

If a criminal justice system offers only the blunt choice between a small imposition of harm (a fine) and a large imposition of harm (a prison term), then it denies the state the capacity to tailor a punishment to fit the crime. This thwarts the system from fulfilling the demands of retributive punishment theories. Moreover, if increasing the amount of a fine or the length of a prison term does not meaningfully increase the harm imposed on an offender, then any quantum of punishment carries less retributive force than has been supposed. Adaptation dulls the punitive effect of fines and incarceration, thereby changing the calculus by which a retributive theory must assign amounts of punishment. If X amount of harm is deserved, will a fine of N dollars be sufficient to impose that harm? The answer must take into account the (large) effect of adaptation and accordingly reduce the level of harm equated with the fine. This Part considers several leading theories from the retributive family and evaluates the extent to which those theories are affected by the behavioral insights about punishment detailed in Part II.

A. *Pure Retributivism*

Although utilitarianism¹³⁴ was preeminent in both political philosophy and punishment theory for most of the twentieth century, it has been displaced in both arenas in the past few decades. In political theory, the change can be traced primarily to the publication of John Rawls' *A Theory of Justice*. In punishment theory, there were several

¹³⁴ Youngjae Lee, *The Constitutional Right Against Excessive Punishment*, 91 VA. L. REV. 677, 737-38 (2005) ("The purpose of punishment, under [the utilitarian] view, is not to give each criminal what he or she deserves, but to deter future crimes, to incapacitate criminals by keeping them 'off the streets,' or to rehabilitate criminals so they would become better citizens."); see also Steven Eisenstat, *Revenge, Justice and the Law: Recognizing the Victim's Desire for Vengeance As a Justification for Punishment*, 50 WAYNE L. REV. 1115, 1162 (2004) ("Utilitarians are forward looking; they countenance punishment only if a social good will come from it."); Erik Luna, *Punishment Theory, Holism, and the Procedural Conception of Restorative Justice*, 2003 UTAH L. REV. 205, 209 (2002) ("Whatever goal is espoused, utilitarian-based punishment is always forward-looking, seeking to reduce the intensity and gravity of crime in society. In other words, utilitarianism takes the position that 'bygones are bygones' and that future consequences should be the sole guide for sanctioning decisions.").

leading contributors.¹³⁵ But the individual most closely identified with the rise of retributivism as the leading theory of punishment is Michael Moore,¹³⁶ and his pure version of the theory is most representative of the broad trend toward this non-consequentialist method of reasoning. By applying the new psychological findings to this most comprehensive and general form of retribution, we will have gone a long way toward applying it to all forms of retribution.

Moore's retributivism is not a mixed theory of punishment. His definition of the word itself rules out any other value: "By 'retributivist' I refer to one who believes that the justification for punishing a criminal is simply that the criminal deserves to be punished."¹³⁷ The project of a retributivist is to illustrate that our intuitions and considered judgments about punishment are captured better by the idea that we punish due to moral desert than by the idea that we punish to achieve aims such as deterrence, incapacitation, or rehabilitation.¹³⁸

The amount of suffering imposed must correspond to the offender's desert: "[R]etributivists at some point have to answer the 'how much' and 'what type' questions for punishments of specific offences and they are committed to the principle that punishment should be graded in proportion to desert"¹³⁹ In short, Moore's pure retributivist theory holds that offenders must be punished, that they must be punished only because they deserve it, and that the amount of punishment must correspond to their level of desert.¹⁴⁰

¹³⁵ For perhaps the most influential early effort, see Herbert Morris, *Persons and Punishment*, *supra* note 93.

¹³⁶ See, e.g., MICHAEL MOORE, *PLACING BLAME: A GENERAL THEORY OF THE CRIMINAL LAW* (1997).

¹³⁷ *Id.* at 83.

¹³⁸ See, e.g., Mary Sigler, *Just Deserts, Prison Rape, and the Pleasing Fiction of Guideline Sentencing*, 38 ARIZ. ST. L.J. 561, 563 (2006) ("Although a retributivist will welcome the positive consequences that punishment may incidentally yield — for example, crime prevention or character reformation — they are not part of the justification for punishment. Thus, a 'retributivist punishes because, and only because, the offender deserves it.'").

¹³⁹ See MOORE, *supra* note 136, at 88.

¹⁴⁰ See Jean Hampton, *Correcting Harms Versus Righting Wrongs: The Goal of Retribution*, 39 UCLA L. REV. 1659, 1663 (1992) ("[R]etributive justice is concerned with wrongful actions from which such harms result. Although a punishment may sometimes involve the wrongdoer compensating her victim in some way, the purpose of punishment is not to compensate the person for the harm suffered, but 'to right the wrong.'").

A necessary precondition to operationalizing that theory is an understanding of the manner and degree to which fines and imprisonment actually harm those who receive them. The findings discussed in Part II affect pure retributivism in two ways. First, the workings of our adaptive capacities mute the differences between large and small fines as well as the differences between long and short prison sentences. And second, adaptation decreases the level of harm that an offender sustains from virtually any fine or period of incarceration.

The first point is simply that if “punishment should be graded in proportion to desert,” then in order to deliver the deserved punishment, the state needs to be able to adjust the amount of imposed harm to fit the severity of the crime. To do that, it relies on the mechanism of increasing or decreasing the amount of a fine or the length of a stay in prison. But as discussed above, such adjustments do not do well in tracking adjustments in the amount of harm felt by the offender. Although an offender will expect a larger fine or a longer incarceration to decrease her happiness far more severely than a smaller fine or a shorter incarceration, her expectation will mistakenly ignore her own adaptive skills.

Even more so than utilitarianism and expressive theories of punishment, which place at least some importance on the amount of harm that a given punishment is *perceived* to impose, pure retributivism concerns itself with the amount of harm *actually* imposed. Its distinctive feature is the principle that to punish criminal behavior is inherently right.¹⁴¹ If it is not possible to punish the right amount, then it is not possible for justice to be done. Pure retributivism thus requires a rethinking of the types of punishment that are currently employed. Those types create the illusion of a spectrum of available harms while in fact offering, more or less, only two. A fine, however large, constitutes only a small diminution of an offender’s happiness. And an incarceration, however brief, constitutes a large diminution of such happiness.

People adapt so thoroughly to economic losses, and their happiness depends so little on their wealth, that fines of varying sizes

¹⁴¹ See MOORE, *supra* note 136, at 105 (noting “the commitment of retributivism . . . to the intrinsic goodness of punishing the guilty”); see e.g., Sigler, *supra* note 138, at 563 (“[P]unishment of the deserving is intrinsically good; its justification does not depend on any further positive consequences that punishment might be expected to produce.”).

do not change much the well-being of those on whom they are imposed. Similarly, people adapt surprisingly well to prison, so staying in prison longer does not decrease happiness as much as one would expect. This is all the more true because any prison term dramatically decreases happiness after prison. Thus, getting out of prison earlier is less valuable than it would appear, both because prison itself is less bad than expected (due to adaptation) and because the alternative of post-prison life is worse than expected.

Let us assume, purely for purposes of illustration, that a fine of \$100 is the deserved punishment for a certain instance of petty theft, and that a prison term of five years is the deserved punishment for a certain instance of assault with a deadly weapon. By “deserved punishment,” we mean that those sentences would impose the amount of harm deemed morally appropriate in each case by the retributive theory. How would the state deal with crimes whose severity falls in between those two? A larger fine will not impose much more harm than the \$100 fine, and a shorter prison term will not impose much less harm than the five-year term. And how would a state respond to a crime far more severe than the assault with a deadly weapon? No matter how long an incarceration it hands down, that sentence will not differ sufficiently from the five-year sentence (in terms of harm imposed) to reflect the difference in deserved punishment.

This also relates to the second way in which adaptation is relevant to retribution. Whatever punishment is currently thought appropriate in response to a given crime will actually inflict less harm on the offender than it would absent adaptation. When a theorist or policymaker seeks to connect a crime with an appropriate punishment, she must incorporate adaptation into her assessment of how much harm the punishment will cause. Just as would-be offenders will wrongly assume that the initial harm of a fine or imprisonment will be sustained for a long time, theorists and policymakers are vulnerable to making the same incorrect assumption.¹⁴² If they do so, then they will set punishments that impose less harm than was deemed deserved—i.e., punishments that do not satisfy the requirements of retribution.

This becomes even more clear when considering the way in which Moore distinguishes his theory from the mixed theory of limiting retributivism (discussed below). The mixed theory treats desert and utility as necessary but not sufficient conditions for punishment. Moore argues that we object to insufficient punishment

¹⁴² See Sevdalis & Harvey, *supra* note 110, at 248.

regardless of utility, pointing to our negative reaction when heinous crimes receive slaps on the wrist.¹⁴³

Once again, we can translate Moore's retributivism into penal policy only if we understand how much harm a given punishment actually inflicts. The premise is that to punish someone too little—i.e., to inflict too light a harm—is a failure. If a fine of \$1000 is thought to inflict a certain amount of harm, but it actually inflicts only half that harm due to hedonic adaptation, then we have not achieved the retributivist objective.¹⁴⁴ Absent an understanding of the powerful effects of adaptation, retributivists risk systematic errors in the calculus of punishment.

B. *Limiting Retributivism*

Both retribution and utilitarianism have a profound influence on actual penal policy in the United States, and a prominent mixed theory of punishment reflects that reality. In this theory known as limiting retributivism—which has been “adopted by most state guidelines systems”¹⁴⁵—retributive considerations set an upper and lower bound on punishment,¹⁴⁶ but within those bounds the sentence is determined by utilitarian aims.¹⁴⁷ After the bounds have been set by the offender's desert (measured principally by the severity of the crime), the specific punishment is chosen “not only [by reference to]

¹⁴³ See MOORE, *supra* note 136, at 98-99. This argument is the opposite of limiting retributivism's parsimony principle (the principle that we should punish no more than needed to achieve the desired level of deterrence), because Moore maintains that we fail to achieve the true goal of punishment if we punish too little. As discussed below, though, limiting retributivism uses desert to set a lower bound of punishment and therefore is not entirely insensitive to the demands of the retributive theory.

¹⁴⁴ As explained below, the consequences of adaptation for the parsimony principle are the other side of the same coin: Adaptation allows us to achieve the desired level of deterrence without inflicting as much harm.

¹⁴⁵ Frase, *supra* note 96.

¹⁴⁶ NORVAL MORRIS, MADNESS AND THE CRIMINAL LAW 179 (1982) (“[A] deserved punishment does not mean the infliction on the criminal offender of a pain precisely equivalent to that which he has inflicted on his victim; it means rather a ‘not undeserved punishment which bears a proportional relationship in a hierarchy of punishments to the harm for which the criminal has been convicted.’”).

¹⁴⁷ See, e.g., NORVAL MORRIS, THE FUTURE OF IMPRISONMENT 58-84 (1974); Frase, *supra* note 96; Lawrence Crocker, *The Upper Limit of Just Punishment*, 41 EMORY L.J. 1059, 1062 & n.8 (1992); see also John Bronsteen, *Retribution's Role*, 84 INDIANA L.J. (forthcoming 2008).

traditional crime-control purposes such as deterrence, incapacitation, and rehabilitation, but also a concept known as parsimony—a preference for the least severe alternative that will achieve the purposes of the sentence.”¹⁴⁸ Among other things, parsimony reflects the acknowledgment that punishment is expensive.¹⁴⁹ If less punishment can achieve the desired end, then society gains monetarily by eschewing a more severe alternative (in particular, a longer prison sentence).

At first blush, it might seem that the effects of adaptation are somewhat less problematic for limiting retributivism than for pure retributivism. The mixed theory does not, after all, require that each offender receive the precise amount of punishment that corresponds to her level of moral desert. But adaptation is relevant to both parts of the mixed theory (setting the bounds and fixing a specific punishment within them) for the same reasons that it is relevant, in turn, to both pure retributivism and pure utilitarianism.

When setting the lower and upper bound of punishment, a limiting retributivist looks to the amount of harm that an offender deserves to experience. The harm actually felt at each bound will be influenced by the considerations discussed in Part II: because offenders adapt to fines and imprisonment, they will experience less harm than would otherwise be expected. This must be taken into account when deciding which punishments correspond to the deserved bounds of harm. It also must be considered when deciding how best to fulfill utilitarian goals within the prescribed bounds. As explained in Part III, any quantum of punishment may be expected (all else being equal) to deter more than its actual harm would warrant because adaptation will diminish the actual harm without diminishing the expected harm.

If we are right that the available degrees of punishment are overstated and that, to some considerable extent, only two significant levels of punishment exist (any fine or any imprisonment), then those two levels could be seen as a very rough way of setting the lower and upper bounds prescribed by limiting retributivism. But large problems would still present themselves. First, would those constitute the bounds for every crime? The theory assumes that the lower and upper bounds of acceptable harm will increase with the severity of the crime, but this would not be feasible if only two main degrees of harm are

¹⁴⁸ Frase, *supra* note 96.

¹⁴⁹ *Id.*

available. Second, it would not be possible to make the adjustments within the bounds that are needed to fulfill utilitarian goals—a linchpin of the theory. If there are only two punishments, small and large, then there is no way to carry out a theory predicated upon making adjustments between two bounds. Only the bounds themselves are available as options. This denudes the theory of its utilitarian element, leaving only the retributivist part remaining.

Adaptation does, however, make it easier for limiting retributivism to achieve one of its principal goals: parsimony. Because would-be offenders will overlook their own abilities to adapt, less punishment is needed to achieve the deterrent aim, thereby saving money and avoiding unnecessary (on this account) suffering. Just as adaptation affects the analysis of utilitarian theories of punishment, it affects the analysis of utilitarian elements within mixed theories.

C. *Expressive Theories*

Throughout this Part, we have equated punishment with the infliction of harm on an offender. If that is what punishment means, then it follows almost by definition that a theory of punishment must be sensitive to the connection between a sentence and the harm it actually inflicts. If the goal of a sentence is to inflict the desired (i.e., deserved, or optimal) amount of harm, then the state can craft appropriate sentences only if it understands the amount of harm they will generate.

But understanding the connection between punishment and harm might be less important for a theory that deemphasizes the importance of harm. Expressive theories of punishment do just that. As Dan Kahan wrote in one of the leading early papers challenging the retributive/utilitarian dichotomy, “Punishment is not just a way to make offenders suffer; it is a special social convention that signifies moral condemnation.”¹⁵⁰ On this view, the important feature of punishment is its expression of societal disapproval of the criminal act.¹⁵¹ The harm inflicted on the offender is not the focus, either for purposes of deterring crime or of meting out that which is deserved.

¹⁵⁰ See Kahan, *supra* note 9; see also, e.g., Dan M. Kahan, *The Secret Ambition of Deterrence*, 113 HARV. L. REV. 413 (1999).

¹⁵¹ See Jens David Ohlin, *Applying the Death Penalty to Crimes of Genocide*, 99 AM. J. INT’L L. 747, 768 (2005).

An initial response that might be provoked by the expressive theory is that the theory would presumably rely on harm at least as a means of differentiating between the levels of disapproval expressed in reaction to different crimes. If the purpose of punishment is to express disapproval, then how does the state express more disapproval for murder than for shoplifting? The most natural answer is to punish murder more severely, as defined by inflicting more harm on a murderer. This would suggest that the way in which punishment actually causes harm would matter to expressive theories, even if its importance were less direct than in the context of retribution or utilitarianism.

But the story is not so simple. When the goal is to use punishment to express condemnation, what matters might be *perceived* rather than *actual* harm. If policymakers, offenders, and the public alike believe that greater fines and prison sentences will harm criminals more than smaller ones, then the state has at its disposal a wide array of punishments with which to express the appropriate level of condemnation in each case. Even if offenders are actually harmed very differently from the way in which they are believed to be harmed, the level of condemnation is unaffected because it depends upon perception rather than reality.

We acknowledge that the behavioral insights about punishment decline in importance as one focuses less on actual harm to an offender and more on society's (mistaken) perceptions of that harm. But even the expressivists do not deny that actual harm has relevance. One who places no importance on harm would be willing to hurt an offender any amount in order to achieve a desired purpose. To rule out the intentional punishment of the innocent, or the imposition of excessive suffering in response to a petty crime, one must care about actual harm and not only about perceived harm.¹⁵²

In addition, a punishment system based entirely upon perception rather than reality would constantly risk being undermined by the truth. When members of the community see that an offender seems perfectly content a short time after paying her fine, might they

¹⁵² It would not be enough for an expressivist to deny the possibility of those outcomes on the ground that they would violate the expressive purpose of punishment — i.e., to say that punishing an innocent would not happen in an expressivist system because it would send the wrong message. First, sending the right message would depend solely on the public's belief that the accused was guilty, not on her actual guilt. And second, the wrong of inflicting harm on the innocent or excessive harm on the is not limited to the fact that it would send a bad message.

not eventually come to suspect that the fine constituted a less satisfactory expression of disapproval than was originally thought? Perhaps the answer is no, because the studies suggest that people do not do well at learning about and predicting adaptation, even after personal experience. Nonetheless, if an entire system depends purely upon appearance, then presumably the caretakers of that system must be sensitive to reality lest it leak out and destabilize the entire structure.

Most expressivists would likely acknowledge the importance of punishment's true effects rather than arguing that only perception matters. Consider the clever mixed theory advanced by Paul Robinson and John Darley in their article *The Utility of Desert*.¹⁵³ Robinson and Darley argue that punishment can best achieve the aim of encouraging compliance with the law if it embodies the community's desert-based standards of justice. Although this theory in name aims to achieve utility by creating a retributive system, it possesses a central hallmark of the expressive approach in that its goals depend more on the perception of desert-based punishment than on its reality. If people believe that community standards of retribution are being fulfilled, then they will be more likely to comply with the law.¹⁵⁴

Robinson and Darley, however, do not emphasize the disconnect between perception and reality but rather focus their attention in the opposite direction. One of the most appealing aspects of their theory is that it envisions the law earning its credibility by actually doing justice. The aim is to make people perceive the law as just by having it actually be just.¹⁵⁵ Among other things, "[t]he criminal law must earn a reputation for punishing those who deserve it . . . and where punishment is deserved, imposing the amount of punishment deserved, no more, no less."¹⁵⁶

Imposing the deserved punishment, no more or less, requires of course an array of punitive options that inflict varying degrees of harm

¹⁵³ 91 NW. U. L. REV. 453 (1997).

¹⁵⁴ *Id.* at 497 ("We have argued that a criminal law based on *perceived* desert can enhance the law's compliance power . . .") (emphasis added).

¹⁵⁵ *E.g., id.* at 477 ("[T]he criminal law can only hope to shape moral thinking . . . if it has earned a reputation as an institution whose focus is morally condemnable conduct and is seen as giving reliable statements of what is and is not truly condemnable. A criminal law that is seen as having a different criterion for criminalization—such as criminalization whenever the greater penalties of criminal law can provide useful deterrents—is not likely to gain such a reputation.").

¹⁵⁶ *Id.*

to match the varying degrees of desert. New understandings of adaptation indicate that we lack those options, thereby creating an obstacle to the successful implementation of expressive theories just as much as to that of retributive and utilitarian ones.

D. *Other Approaches to Retribution*

In a very recent article, Paul Robinson has catalogued several different forms of retributive theory.¹⁵⁷ In particular, he describes approaches to retribution as falling into three categories: vengeful, deontological, and empirical. The vengeful approach has its roots in the *lex talionis*—an eye for an eye—and sets the amount of deserved punishment by reference to the harm suffered by the victim.¹⁵⁸ The deontological approach focuses not on the harm caused by the crime but rather on the blameworthiness of the offender.¹⁵⁹ Empirical retributivism also emphasizes the offender’s blameworthiness but measures it differently:¹⁶⁰ whereas deontological retributivism uses philosophical principles to arrive at the amount of deserved punishment, empirical retributivism uses behavioral studies to learn the community’s standards of desert and blameworthiness.¹⁶¹

All three forms of retributivism are challenged by the new findings about the effect of punishment on happiness. Vengeful retributivism demands that an offender “‘should suffer in the same degree as his victim.’”¹⁶² To make that happen, the state must assess the level of the victim’s suffering and then choose a punishment that takes a similar toll on the criminal. This requires factoring in the effect of adaptation on the harm that punishment will cause (as well as its effect on the harm the victim suffered).¹⁶³

¹⁵⁷ Paul H. Robinson, *Competing Conceptions of Modern Desert: Vengeful, Deontological, and Empirical*, 67 *CAMBRIDGE L.J.* 145 (2008), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=924917.

¹⁵⁸ *Id.* at 4-5.

¹⁵⁹ *Id.* at 6; see Aaron J. Rappaport, *Rationalizing the Commission: The Philosophical Premises of the U.S. Sentencing Guidelines*, 52 *EMORY L.J.* 557, 568 (2003) (“[P]unishment is justified based on some inherent moral quality of the act or actor himself.”).

¹⁶⁰ See Robinson, *supra* note 157, at 7-8.

¹⁶¹ *Id.*

¹⁶² *Id.* at 5 (quoting JOEL FEINBERG & HYMAN GROSS, *PHILOSOPHY OF LAW* 541 (1980)).

¹⁶³ See Bronsteen, Buccafusco, & Masur, *supra* note 2.

Deontological and empirical retributivism aim to ensure simply “that the offender is given . . . that amount of punishment that puts him in his proper ordinal rank among all cases of differing degrees of blameworthiness.”¹⁶⁴ Although they determine blameworthiness (i.e., desert) differently, they both require that more punitive harm be imposed on more serious offenders. As in the case of vengeful desert, this can be accomplished only by accounting for the effects of adaptation on the actual harm created by punishment.

One last retributive theory that merits mention is “consequentialist retributivism.”¹⁶⁵ This is the idea that a state should “maximiz[e] the *total* amount of desert-based punishment.”¹⁶⁶ Police and prosecutors with limited resources would aim to use those resources efficiently, punishing as much as possible where warranted. The police would “focus on the per-unit cost of deserved punishment,”¹⁶⁷ pursuing offenders with the highest ratio of desert¹⁶⁸ to resources necessary for apprehension. Prosecutors would plea bargain extensively to conserve time, making it possible to punish as many offenders as much as possible, within the bounds of the punishment they deserve.¹⁶⁹

This approach is an attempt to operationalize retributive theory, and as such it relates particularly well to our project of identifying factors that determine the way in which theory can be put into practice. As with all retributive theories, it limits punishment to that which is deserved. Imposing harm above that limit in response to any particular crime would be out of bounds, and so the theory must be supplemented with an account of the way in which punishment translates into harm. Our contribution is to supply that account.

V. CONCLUSION

More serious crimes should receive greater punishment than less serious crimes, but the human capacity to adapt frustrates this core requirement of any criminal justice system. A large fine will not

¹⁶⁴ *Id.*

¹⁶⁵ See Michael T. Cahill, *Retributive Justice in the Real World*, 85 WASH. U. L. REV. 815, 833-35, 861-69 (2007).

¹⁶⁶ *Id.* at 833.

¹⁶⁷ *Id.* at 851.

¹⁶⁸ Here, desert is linked closely with the severity of the crime committed and the amount of punishment deserved.

¹⁶⁹ *Id.* at 855.

ultimately diminish an offender's happiness much more than will a small one, nor will a long prison sentence impose much more suffering than a short one. The state thus cannot drastically change the severity of a punishment by adjusting the size of a fine or the length of an incarceration.

By decreasing the prospects for proportional punishment, adaptation restricts the penal system's potential to achieve either utilitarian or retributive goals. Instead of being able to tailor punishments so as to increase utility or to reflect desert, the state wields a blunt instrument that offers no way to avoid treating dissimilar crimes similarly.

It might well be possible to find acceptable forms of punishment that resist adaptation and enable proportionality in sentencing to be achieved. But the task is not easy, nor the solution readily apparent. For now, all we can offer is the unsettling evidence that current forms of punishment do not impose harm in the ways or to the degrees that they are assumed to do so. Neither utilitarian nor retributivist theories of punishment can be convincing or complete if they fail to account for this fact.

Readers with comments should address them to:

Professor Jonathan Masur
University of Chicago Law School
1111 East 60th Street
Chicago, IL 60637
jmasur@uchicago.edu

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