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RECONSIDERING THE RELATIONSHIP BETWEEN COGNITIVE PSYCHOLOGY AND PLEA BARGAINING

RUSSELL COVEY*

I. INTRODUCTION

Through several decades of empirical and experimental research, cognitive scientists have identified numerous ways in which human reasoning diverges from the rational choice model employed by mainstream economic theory and conventional law and economics.1 In assessing complex situations, people tend to focus on facts that are most consistent with their interests (self-serving or egocentric bias) and to ignore other facts that conflict with their interests (denial mechanisms and blocks). People give greater credence to information that confirms their pre-existing beliefs and less credence to information that conflicts with those beliefs (confirmation bias). When assessing risk, people are usually overconfident, believing that bad events are less likely to happen to them than to others (overconfidence bias). They also are not very good at assessing probabilities, particularly when the outcome in question is a rare event (e.g., an earthquake or airplane crash), or where there is limited information available from which to form a prediction. As a result, they tend to rely on rules-of-thumb, or heuristics, to simplify this task.2 Even apart from these particular cognitive traits, human beings are imperfect calculators of costs and benefits due to inescapable limits on information gathering and processing. Most people do not

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2. JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES, supra note 1, at 11. One example is the “availability heuristic,” which suggests that recent incidents or events, or those witnessed by or brought to the knowledge of an individual, are perceived as more likely to occur than other incidents or outcomes. Id. Another example is the “representativeness heuristic,” which refers to the tendency of actors to assume that if one thing resembles another thing, it likely is causally related to that thing. Id. at 4; Russell B. Korobkin & Thomas S. Ulen, Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics, 88 CAL. L. REV. 1051, 1086 (2000).
attempt to absolutely maximize utility, as conventional economic theory supposes, but merely to "satisfice." 3

Cognitive research has demonstrated flaws in several other assumptions commonly employed by economic theorists. 4 Economists teach that rational maximizers should ignore sunk costs, but researchers have discovered that sunk costs tend to influence actual decision making. Economists assume that preferences are fixed and that entitlements gravitate to their most-valued uses. Again, cognitive research has demonstrated that these conventional assumptions are not realistic. Preferences are not fixed but are subject to a variety of distributional influences that complicate the efficient-market thesis. Both of these cognitive tendencies can be attributed, at least in part, to a strong aversion to losses (loss aversion) and to the related "endowment effect," by which individuals tend to place a higher value on goods they possess than on those they do not.

In recent years, criminal law scholars have begun to apply the insights of this cognitive research to the study of plea bargaining with important results. 5 Combined with critical work demonstrating a variety of systemic defects that undermine the market-efficiency thesis, this research suggests that conventional law and economics descriptions of plea bargaining as the product of the rational, bilateral exchange of entitlements driven by punishment-maximization/minimization strategies simply does not provide an adequate account of the plea bargaining system. 6 Although this research supplies a powerful basis on which to reject the assumption that plea bargaining outcomes fairly and accurately reflect law's shadows, it also gives rise to a puzzle. 7 Most of the cognitive quirks and biases identified by researchers, such as loss aversion, overconfidence, overdiscounting, and self-serving bias, suggest that defendants should be consistently disinclined to plead guilty and that prosecutors and defendants should consistently disagree about what

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4. Korobkin & Ulen, supra note 2, at 1086.


6. Id. at 2467.

7. The insight that bargaining occurs in the "shadow of law" was first developed in the context of divorce, see Robert H. Mnookin & Lewis Kornhauser, Bargaining in the Shadow of the Law: The Case of Divorce, 88 YALE L.J. 950, 950 (1979), and has been pursued in many different legal domains. Professor Bibas contributed the most significant critique of the shadow of law claim in the plea bargaining context. See generally Bibas, supra note 5.
constitutes a fair price for a guilty plea. Were one to form predictions about plea bargaining based only on cognitive research, it would be logical to expect plea bargaining to be a rare occurrence. Of course, it is not. Plea bargaining is far and away the predominant procedural mechanism for the resolution of criminal charges.8 Criminal trials, not plea bargains, are the oddity.

Some of the pioneering work in this area—by Professor Bibas and others—accepts plea bargaining as a given and examines the impact that cognitive bias has on the bargaining decisions made by prosecutors and defendants. That work concludes that cognitive bias sometimes impedes defendants from accepting utility-enhancing plea offers and less frequently induces defendants to accept utility-diminishing plea bargains.9 This Essay reconsiders the relationship between cognitive bias and plea bargaining by asking a different question. It does not seek to explain why parties sometimes fail to agree to utility-enhancing bargains, but instead asks why plea bargaining is so prevalent notwithstanding the existence of plea-discouraging cognitive bias. The answer further elucidates and amends the standard law-and-economics account of plea bargaining: not only is the criminal justice system functionally designed to induce defendants to plead guilty (a now banal observation), but many apparently arbitrary and oppressive features of current criminal practice can be explained largely as devices whose function, in whole or in part, is to neutralize the plea-discouraging effects of cognitive bias. Incorporation of the insights of cognitive psychology into plea bargaining theory thus provides a more nuanced explanation of the shape of many features of the criminal justice system. Taking cognitive bias into account casts new light on the factors that drive plea bargaining outcomes, including the magnitude of sentencing differentials, the pervasiveness of pretrial detention, and the prosaic

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9. Bibas, supra note 5, at 2467–68; see also Robert E. Scott & William J. Stuntz, Plea Bargaining as Contract, 101 YALE L.J. 1909, 1925–27 (1992) (acknowledging possible impact of cognitive bias on plea bargaining but arguing that benefits of plea bargaining, as well as various procedural devices already in place, diminish the importance of any cognitive bias that might affect defendants' plea bargaining choices). For an early attempt that did address this question squarely, see generally Richard Birke, Reconciling Loss Aversion and Guilty Pleas, 1999 UTAH L. REV. 205 (discussed infra at Part III.A).
procedural brutality that is a universal feature of virtually every encounter with the system.

Part II of this Essay examines in more detail different types of cognitive bias and evaluates the likely impact of those biases on plea bargaining. It concludes that cognitive bias, if left unchecked, should discourage resolution of criminal cases through negotiated settlement contrary to the predictions of simple economic analysis. Part III assesses a variety of features of the criminal justice system that work to check these tendencies.

II. COGNITIVE BIAS AND PLEA BARGAINING

A. Bounded Rationality

Bounded rationality refers to the relatively obvious proposition that "human cognitive abilities are not infinite." People do not attempt to ruthlessly maximize utility. At most, they are likely to "satisfice"; that is, once they have identified an option that appears "good enough," they will discontinue their search and select that option.

Bounded rationality presents a problem for the economic model of plea bargaining, which requires prosecutors and defendants alike to rationally calculate the value of plea offers based on a variety of difficult-to-predict inputs. According to conventional economic theory, the value of a plea bargain is determined by reference to opportunity cost. The opportunity cost of a guilty plea is forfeiture of the right to a trial. Therefore, the value of a guilty plea depends on the expected value of trial. Defendants seeking to minimize punishment rationally should prefer plea bargains whenever the expected punishment resulting from a guilty plea (Vp) is less than the expected trial sentence multiplied by the probability of conviction, minus the added resource costs (if any).

11. See SIMON, supra note 3, at 261.
12. See Nicola Boari & Gianluca Fiorentini, An Economic Analysis of Plea Bargaining: The Incentives of the Parties in a Mixed Penal System, 21 INT'L REV. L. & ECON. 213, 222 (2001) (stating that defendants' choice to plead guilty turns on an evaluation of "the monetary and opportunity costs born from the phase of indictment till the disposition of his case at trial or as a result of plea bargaining").
13. Scholars applying economic theory to civil litigation have relied on similar assumptions. See, e.g., Robert J. Rhee, The Effect of Risk on Legal Valuation, 78 U. COLO. L. REV. 193, 194 (2007) ("[L]aw and economics scholarship has subscribed to the conventional wisdom that the value of a legal dispute is its expected value, defined as the probability of liability multiplied by the expected judgment amount.").
of trial."

Although simple to calculate on paper, the pervasive uncertainties of criminal litigation make practical application of the formula more problematic. To make the correct decision, the parties must at minimum estimate the probability that the defendant will be convicted at trial; predict what punishment will be imposed if the defendant is convicted; estimate the costs involved in litigation, including attorneys fees, time lost waiting in court, and the psychological stress of non-resolution; and then calculate the \textit{ex ante} trial sentence by multiplying the expected trial sentence by the probability of conviction, discounted by the estimated process costs. They then must predict what punishment will be imposed if they enter a guilty plea and compare those two values in order to decide which course of action to select.

Given the complexity of these tasks and the information deficits typical during the plea bargaining process, valuation estimates are certain to vary widely. Probabilities of conviction depend on a wide assortment of factors that are hard to predict. Defendants may not know what evidence the state has gathered or whether that evidence will be persuasive to a jury. If there are witnesses, defendants will not know whether the witnesses will show up on the day of trial, what they will say if they do, or whether the testimony given will be credible. Defendants cannot know in advance who will be on the jury, and thus they cannot estimate how sympathetic the jury might be to their case. At the same time, because most sentencing systems assign a range rather than a specific outcome, defendants may have only a general notion of the sentence they would actually receive upon conviction. That indeterminacy is diminished by a guilty plea only where defendants are offered plea bargains carrying specific sentences rather than charge concessions or sentence recommendations. In any case, defendants often may have only a fuzzy notion of the likely consequences of entering a guilty plea, making any comparative assessment of plea bargaining even more difficult.

14. In economic terms, the expected value of a guilty plea can be calculated pursuant to the formula \( V_p = (P^*E_t) - R \), where \( V_p \) represents the value of the guilty plea, \( P \) is the probability of conviction, \( E_t \) is the expected sentence upon conviction at trial, and \( R \) is the resource cost of trial. See, e.g., Jennifer F. Reinganum, \textit{Plea Bargaining and Prosecutorial Discretion}, 78 AM. ECON. REV. 713, 714 (1988). Both plea bargains and trials entail resource costs, but trials usually consume substantially more resource costs—both in terms of pretrial preparation and court time, and often, post-conviction review—than guilty pleas. Accordingly, \( R \) here represents the marginal resource costs of trial above those expended for guilty pleas.
In short, the plethora of variables, the absence of reliable information, and the difficulty of making accurate predictions would seem to create substantial obstacles to careful, precise, and accurate decision making in plea bargaining. It is not immediately obvious how this uncertainty should impact plea bargaining. Uncertainty by itself could, in theory, make plea bargaining either more or less likely depending largely on the particular defendant's risk tolerance. However, consideration of several additional well-documented cognitive biases working in combination with the high level of uncertainty inherent in criminal litigation supports a prediction that boundedly-rational defendants will disproportionately disfavor guilty pleas in favor of trials.

B. Overconfidence and Self-Serving Biases

Cognitive research demonstrates that when it comes to evaluating risk, people are consistently overconfident. Most people believe they are above average drivers; are healthier, smarter, and more ethical than others; and that good things will happen to them more often and bad things less often than statistics predict. Similarly, people typically evaluate information selectively, giving more attention and credence to information that is consistent with their pre-existing beliefs. This tendency is referred to as "confirmation," "egocentric," or "self-serving" bias, and it has been well-documented by researchers. People persist in their inaccurate beliefs even where they are expressly informed of the probabilities and educated about the existence and effects of such biases.

The effect of these biases on plea bargaining seems fairly predictable. Overconfident criminal defendants should be expected

15. Persons who are risk averse should view uncertainty as a "disutility" and thus be more likely to pursue a risk-minimization strategy, while persons who prefer risk should do the opposite. RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 11 (3d ed. 1986) (noting that expected utility of a benefit under conditions of uncertainty varies depending on risk preference of individual).


18. See Babcock & Loewenstein, supra note 16, at 361 (describing results of experiment showing that informing participants about self-serving bias did not affect tendency to interpret ambiguous data in self-serving way).
consistently to overestimate the probability that they will prevail at trial. Prosecutors and defendants should look at the same evidence and have consistently divergent views as to its persuasiveness to a judge or jury. As a result, the parties should tend to disagree about all of the inputs to the plea-pricing formula, including the probability of conviction, the trial sentence, and the plea sentence. Because overconfidence makes it more difficult for the parties to reach a compromise that both sides perceive to be mutually beneficial, the predicted result is over-litigation of disputes.19

C. Loss Aversion and Risk Aversion

Another well-documented cognitive phenomenon that is in tension with plea bargaining is loss aversion.20 Loss aversion describes the tendency of actors to protect gains by shunning risk while simultaneously preferring risk where it promises a chance to avoid taking a loss.21 Because a plea bargain is a trade of a certain loss (a conviction and punishment) for a chance of no loss (an acquittal) accompanied by a chance of a greater loss (a trial conviction and enhanced sentence), cognitive research suggests that, all else being equal, most persons would prefer to gamble on total exoneration at trial rather than accept a certain, though likely smaller, punishment by pleading guilty.22 It also supports a prediction that while defendants should seek out risk in order to avoid taking losses, prosecutors' plea bargaining conduct will be comparatively conservative since their incentives are reversed.

The documented fact that people tend to be less averse to loss-

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19. This prediction seems to hold in the civil context. See Jeffrey J. Rachlinski, The Uncertain Psychological Case for Paternalism, 97 NW. U. L. REV. 1165, 1192 (2003) (stating that “excess confidence impedes settlement” and produces “an excess of litigation”).

20. See Birke, supra note 9.

21. Risk aversion in the realm of gains can be reconciled with economic theory through the concept of “diminishing marginal utility.” See POSNER, supra note 15, at 12. Because a dollar gained has less utility than the last dollar possessed, the chance of losing that last dollar is not fully compensated by the chance to win an additional one. Applied to the domain of losses, however, diminishing marginal utility seems to predict that people will be equally risk averse in protecting against losses since the loss of two dollars is greater than two times the loss of one dollar. Cognitive research shows that people are nonetheless willing to assume the risk of large losses to try to prevent small losses.

22. See Birke, supra note 9, at 209 (arguing that defense counsel is responsible for persuading defendants to abandon utility-enhancing trials); Ian Weinstein, Don't Believe Everything You Think: Cognitive Bias in Legal Decision Making, 9 CLINICAL L. REV. 783, 799 (2003) (noting that a “client will have a greater tendency to accept a plea offer preceded by bad news”).
avoiding risk than to gain-maximizing risk is paralleled by the more general observation that risk-preference curves vary. Rational choice theory assumes either indifference to risk or risk aversion, but some people—gamblers and mountain climbers, for instance—affirmatively seek out risk (at least within delimited spheres of their lives). Preferences toward risk can vary for individuals, depending on context. Because a trial represents risk, the tendency of many people to avoid risk might lead them to avoid trials in favor of plea bargains. However, because risk aversion decreases where risky actions carry the potential of averting losses, the general tendency toward risk aversion might well be outweighed by loss aversion in the context of serious criminal charges. Moreover, criminals as a class would seem to be risk seekers rather than risk avoiders. Accordingly, loss aversion and risk seeking should tend to increase most criminal defendants' preferences for trials over plea bargains.

Loss aversion is likely related to another hard-wired cognitive characteristic: the endowment effect. Conventional economic theory assumes that individuals' preferences are fixed and that the assignment of entitlements does not affect subjective valuations, but research has shown that this assumption is unrealistic. The endowment effect describes a phenomenon documented in several studies by which the initial distribution of entitlements directly affects preferences because individuals consistently place a higher valuation on goods they possess than on those they do not.

Criminal defendants as a class can claim few endowments, but one the system provides is the right to a trial. That right is intuitively and widely understood. A defendant charged with a serious criminal offense should be expected to place a high valuation on the right, particularly once the prospect of a trial becomes tangible. This enhanced valuation should necessarily increase the defendant's subjective valuation of the worth of his guilty plea, further increasing the size of the plea discount necessary to induce the defendant to relinquish it.


24. Many commentators at least assume, based on the fact that criminals opt to engage in inherently risky activities, that they have a higher tolerance, or even an affirmative preference, for risk. See, e.g., Bibas, supra note 5, at 2495 (hypothesizing that innocent defendants are more risk averse than guilty defendants).

D. Overdiscounting

Related but distinct from risk preference is time preference, or discounting. Some discounting is plainly rational. Ceteris paribus, it is always marginally better to consume a good now (or defer a bad until later) than to defer gratification until tomorrow (or suffer the bad consequence now), for the simple reason that tomorrow may never come. However, while some discounting is rational, significant discounting may not be. People who overdiscount by disproportionately valuing present utility over future utility make a cognitive error. One may or may not be aware of the error. A person who fails to perceive the time preference error is overdiscounting, while a person who understands the time preference error but who cannot delay gratification, notwithstanding a desire to, manifests "bounded willpower." In both cases, actors' choices do not maximize expected utility in the manner that rational choice theory predicts.

Just as there is strong reason to suspect that criminals as a class are likely to be less risk averse than others, there is also reason to suspect that they are more likely to overdiscount and to display bounded willpower. As a result, most persons charged with crimes should be expected to place a greater-than-average value on the short-term consequences of their actions and a smaller-than-average value on risks that will manifest only in the long term. The emphasis on the near horizon necessarily should make trial a more appealing prospect because it carries the promise of near-term freedom, rather than plea bargains, which guarantee near-term punishment. To entice an overdiscounting defendant to relinquish his or her trial right, prosecutors need to offer proportionately larger sentence discounts than economic theory would otherwise predict.

E. Fairness Bias

In addition to these cognitive distortions in economic rationality, researchers have identified an additional phenomenon—the "fairness" bias—that regularly leads individuals to act in ways not predicted by economic theory.

26. To quote the eminent economist, Janis Joplin: "If you got it today you don't want it tomorrow, man, 'cause you don't need it, 'cause as a matter of fact, as we discovered in the train, tomorrow never happens, man." JANIS JOPLIN, Ball and Chain, on JOPLIN IN CONCERT (Sony 1972), available at http://www.sing365.com/music/Lyric.nsf/Ball-and-Chain-in-album-Joplin-in-Concert-lyrics-Janis-Joplin/8BBEEAFB100CBB9548256959002C9054.

27. See Jolls et al., supra note 10, at 1479 (defining bounded willpower as instances in which human beings take actions "they know to be in conflict with their own long-term interests").
rational choice theory. Considered in the plea bargaining context, the fairness bias provides an additional factor that might be expected to impede plea bargaining.

Research into perceptions of fairness demonstrates that self-interested, utility-maximizing behavior is moderated where such pure, short-term maximizing behavior is in tension with perceptions of fairness. That people do not always try to fully maximize their self-interest is demonstrated in experiments involving the "ultimatum game," in which player A is given a sum of money (say, $20) and must divide that sum with player B. Player B has no control over the size of the shares but can reject any proposed distribution, in which case neither party gets to keep the money. Straight rational choice theory suggests that Player A will propose a division giving him almost all of the $20 and Player B very little (say, $19 to $1, or even $19.99 to $0.01), and that Player B will accept that proposal, since, *ex ante*, that strategy maximizes both players' expected utility. After all, Player A maximizes expected utility by keeping as much of the pot as possible, and even when offered a small share, Player B is still better off by taking it than by rejecting it. Studies of the ultimatum game in practice, however, indicate that low offers are consistently rejected despite the fact that doing so fails to maximize expected utility. Although such conduct is not consistent with the assumption of simple expected-utility maximization, it is explainable by reference to considerations of fairness. That is, in some situations, people willingly sacrifice their own short-term utility to avoid being treated "unfairly," or to punish the other party for acting unfairly.

Given widespread perceptions among defendants that the criminal justice system does not treat them fairly, the fairness bias might be expected to encourage some defendants—especially, but not only, factually innocent ones—to reject utility-enhancing plea bargains simply because the outcome strikes them as unjust or because they seek to punish prosecutors for making offers they perceive to be unfair.

Like self-serving bias, loss aversion, overdiscounting, and bounded willpower, fairness bias distorts outcomes predicted by expected utility-

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29. See *id.* (discussing empirical research).
30. See Jolls et al., *supra* note 10, at 1494.
maximization theory. Cognitive research thus depicts a bargaining context dominated by converging vectors all pointing away from negotiated settlements and in the direction of adversarial dispute resolution. Although each of these phenomena by itself might have only a marginal impact (or no impact at all) on individual cases, taken together, they likely create powerful cognitive resistance to guilty pleas.

III. FEATURES OF THE CRIMINAL JUSTICE SYSTEM THAT OVERCOME COGNITIVE RESISTANCE TO PLEA BARGAINING

Given these cognitive tendencies, the decks would seem to be stacked against plea bargaining. A plea bargain asks overconfident, risk-preferring individuals to agree to suffer certain adverse consequences while abandoning trial rights with which they are endowed and which offer the only possible path to a loss-free outcome. In addition, the increased risk assumed by going to trial involves risk of added punishment that would not be consumed until some future date—perhaps one far off into the future. To convince a criminal defendant to agree to a plea bargain, in other words, the prosecutor must overcome overconfidence and self-serving biases, risk preferences, loss aversion, the endowment effect, perceptions of fairness, over-discounting, and bounded willpower. What is more, because most criminal defendants do not pay their own legal costs but instead receive state-compensated lawyers, one of the most significant economic incentives to compromise litigation—legal costs—is frequently not part of the defendant’s calculus.\(^2\)

How, then, does the system manage to induce so many defendants to relinquish their trial rights and accept guilty pleas in light of the strong cognitive preference to do precisely the opposite?\(^3\) In short, by every means possible. All things being equal, cognitive biases may well impel defendants to opt for trial, but things are far from equal. The criminal justice system contains numerous levers to induce defendants to abandon their right to trial and to accept a guilty plea, and its evolution has tended, with few exceptions, to expand and strengthen these levers.


\(^3\) As Robert Cooter and Daniel Rubinfeld long ago pointed out, “any policy that increases litigation costs, lowers settlement costs, or makes disputants pessimistic about their trial prospects, will increase settlements.” Robert D. Cooter & Daniel L. Rubinfeld, Economic Analysis of Legal Disputes and Their Resolution, 27 J. ECON. LITERATURE 1067, 1076 (1989).
These facets of the criminal justice system have long been apparent to even the most casual of observers of the system.\(^{34}\) What has not been fully appreciated, however, is the way they function to overcome cognitive biases that otherwise would impede plea bargaining.

The next part of the Essay describes several of these counterweights, starting with the most obvious and, undoubtedly, the most powerful: the simple fact that in the vast majority of cases, defendants who plead guilty get outcomes that are not only better than can be expected at trial, but better by orders of magnitude.

A. Overcoming Loss Aversion and Bounded Rationality with Orders of Magnitude: High Plea Discounts and Punitive Trial Penalties

The tension between loss aversion and the high guilty plea rate was first noted by Professor Richard Birke in one of the earliest scholarly efforts to apply the insights of cognitive psychology to plea bargaining.\(^{35}\) In that article, Birke considered several explanations for the puzzling persistence of extraordinarily high plea rates in light of the natural tendency of decision makers to take risks to avoid certain losses. As Birke pointed out, one explanation for why loss-averse criminal defendants plead guilty in such great numbers is that they are consistently getting such "good deals"—that is, plea bargains in which the "utility value of the plea" is so much higher than that of trial that even loss-averse defendants cannot say no.\(^{36}\) Birke rejected this hypothesis, however, for a variety of reasons. First, he contended that political and judicial checks on bargaining would make it difficult, if not impossible, for prosecutors to systematically offer such deals to defendants.\(^{37}\) Prosecutors would be inhibited from making sufficiently

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35. Birke, supra note 9, at 207.
36. Id. at 219.
37. Id. at 221–23.
good offers, he argued, because of political opposition to perceived soft
treatment of criminals. At the same time, judges should be disinclined
to allow defendants to plead guilty on such lenient terms. Birke argued
that in sentencing guideline jurisdictions, a judge’s authority to impose a
highly discounted sentence would be limited by the guidelines, and in
non-guideline jurisdictions, judges themselves would likely balk where
plea-bargained guilty pleas did not reflect the true magnitude of the
defendant’s offense. Second, Birke argued that sentencing guidelines
and mandatory minimum sentencing statutes check the ability of
prosecutors to make offers sufficiently low to induce defendants in weak
cases to plead guilty. Third, Birke argued that constitutional restraints
should check excessively lenient plea offers. Such plea offers, he
argued, would either constitute under-punishment of crime or would
effectively chill the constitutional right to trial. Assuming that
prosecutors have no interest in the former, the “good deals” hypothesis
necessarily implies that defendants routinely are coerced by fear of the
trial penalty to abandon their constitutional rights, an outcome
inconsistent with widely accepted constitutional principles. Finally,
Birke noted that the worst predicted trial outcomes are often mitigated
by compromise verdicts and jury nullification, and that defendants
themselves should rationally interpret lenient plea offers as
prosecutorial admissions of evidentiary weakness. Birke concluded
that the “good deals” hypothesis simply could not be true and that the
high plea rate was most likely a result of defendants receiving bad or
biased legal counsel. Although Birke’s conclusion that defendants
often receive inadequate legal representation and deficient advice
undoubtedly has merit, Birke’s rejection of the “good deals” hypothesis
is due for reconsideration.

1. Plea Discount Magnitudes

There is no definitive evidence establishing just how large the mine-
run plea discount/trial penalty really is, but what evidence is available
suggests that it is very large indeed. State sentencing statistics for 2002 show the median sentence for all felony cases adjudicated by guilty pleas to be 36 months, and the median sentence following jury trial conviction at 120 months, a 333% trial penalty. The mean statistics are similar: 52 months for guilty pleas, and 140 months for jury trials, a 292% trial penalty.

Of course, gross statistics comparing trial sentences to plea sentences might miss important factors that account for some of the disparity. Perhaps the cases that go to trial are consistently more serious than the cases that plead out. The opposite, however, may also be true; the raw statistics simply provide no answer to that question. A leading recent study of plea discount rates led by Professor Nancy King used regression analysis to isolate the impact of method-of-conviction on severity of sentence. Drawing on a limited data pool, the study found consistent evidence of a trial penalty ranging in size from roughly 13% to 461%, depending on the state and the offense of conviction. Others have calculated average state trial penalties of 300%, rising in some states to as high as 500%. Abundant anecdotal evidence indicates that even higher trial penalties are not uncommon, particularly in dispositions of first-time offenders eligible for probation or other non-incarcerative disposition.

47. See Ronald F. Wright, Trial Distortion and the End of Innocence in Federal Criminal Justice, 154 U. PA. L. REV. 79, 109 (2005) (noting possibility that “rational prosecutor must set a ‘market-clearing’ price high enough to obtain guilty pleas even in weak cases”) (citing Hans Zeisel, The Offer That Cannot Be Refused, in FRANKLIN E. ZIMRING & RICHARD S. FRASE, THE CRIMINAL JUSTICE SYSTEM: MATERIALS ON THE ADMINISTRATION AND REFORM OF THE CRIMINAL LAW 558, 559–60 (1980) (“[T]he greater the difference between the offered sentence and the sentence expected after conviction at trial, the more defendants will plead guilty and avoid trial.”)).


49. Id.


51. Id. The data pool in the King study was limited in part by the design of the study, which focused on bench trial outcomes as well as guilty plea and trial outcomes.

52. See Candace McCoy, Bargaining in the Shadow of the Hammer: The Trial Penalty in the USA, in THE JURY TRIAL IN CRIMINAL JUSTICE 23, 27 (Douglas D. Koski ed., 2003) (noting statistics showing that trial penalty in most states averages 300% (“mean sentence imposed in all felony offenses: 54 months after guilty plea versus 150 months after jury verdict”) and in some cases rises as high as 500%).

53. See, e.g., STEVE BOGIRA, COURTROOM 302: A YEAR BEHIND THE SCENES IN AN AMERICAN CRIMINAL COURTHOUSE 38–39 (2005) (recounting sentencing of seventeen-year-old defendant in car theft case who was offered conditional discharge by sentencing
But large as they are, these figures fail to capture the actual trial penalties at work because they compare only outcome disparities between guilty pleas and trials for the same offense of conviction. That, however, is the wrong comparison. In most cases, by pleading guilty a defendant not only bargains for the opportunity to receive a more lenient sentence for the offense of conviction, but he also receives the opportunity to plead guilty to a less serious charge carrying a less onerous penalty. To calculate the actual plea discount in any particular case, one must compare the sentence imposed on the lesser charge to which the defendant pleaded guilty with the sentence that would have been imposed after conviction on potentially higher charges at trial.

An accurate estimate of the operative trial penalty, therefore, depends not only on raw sentence differentials but also on the amount and type of charge dismissal and movement that accompanies typical plea bargains.\(^\text{54}\) Although it is quite difficult to estimate the typical additional discount resulting from such charge reductions, that additional discount need not itself be large to have large effects. A 10% discount resulting from a charge reduction, for example, would magnify the average 300% trial penalty by 33% (that is, increase the trial penalty from 300% to 333%), while a 50% reduction would double the penalty to 600% (and the "high-end" penalties to 1000% or more).\(^\text{55}\)

judge in a case that could have resulted in up to a seven-year term if convicted at trial). Substantial trial penalties can often be manufactured merely by credible application of the statutory sentencing range for an offense, which is often expansive. Where the judge participates in plea bargaining, as is the practice in some jurisdictions, the credibility of the implied threat to impose a much stiffer sentence after conviction than offered before trial is undoubtedly substantial. Id. at 42–43 (describing judge's offer to defendant of a minimum six-year term for armed robbery, where maximum penalty is thirty years).

\(^\text{54}\) See Ronald F. Wright & Rodney L. Engen, The Effects of Depth and Distance in a Criminal Code on Charging, Sentencing, and Prosecutor Power, 84 N.C. L. REV. 1935, 1938–39 (2006) (reviewing data from North Carolina showing that charge reductions are common and have "a large effect on average sentence severity"); id. at 1946–47 (reporting results of study indicating that prosecutorial charge reductions account for an approximately twenty-five percent plea discount on average (from 210 to 164 months), and that judges' sentencing discounts further increased plea discounts by another sixty percent on average (from 164 to 64 months)).

\(^\text{55}\) Fifty percent does not seem to be an unrealistic discount resulting from charge bargaining. As a point of comparison, in Virginia the difference in average sentence for first-degree versus second-degree murder is about fifty percent. See VA. CRIM. SENT'G COMM'N, 2005 ANNUAL REPORT 47 & figs.40 & 41 (2005), available at http://www.vcsc.virginia.gov/2005FULLAnnualReport.pdf; Richard S. Frase, Defining the Limits of Crime Control and Due Process, 73 CAL. L. REV. 212, 227 (1985) (reviewing HANS ZEISEL, THE LIMITS OF LAW ENFORCEMENT (1982)) ("Zeisel's data on charge bargaining suggest that defendants who plead guilty are receiving substantial concessions in the level of conviction they could expect if they went to trial: an average reduction of 2.3 crime classes."). Zeisel estimated that the
there is no comprehensive data on charge movement patterns, it is easy to see that charge bargaining can result in enormous discounts. In a typical case described by one New York defense attorney, a defendant faced burglary charges carrying a statutory maximum term of thirty years. By negotiating a plea to unlawful entry (a lesser included offense—essentially, burglary minus intent to commit a felony—that carried a maximum sentence of six months), the lawyer won (at least on paper) a sixty-fold sentence discount. Similarly, a typical plea bargain in a homicide case might involve an agreement to plead guilty to a second-degree murder charge in exchange for dismissal of a first-degree murder charge. The sentencing differential between first- and second-degree murder can easily approach or exceed 100%. A murder charge reduced to manslaughter represents an even greater reduction, one that in federal court averages approximately 650%. Again, although we currently lack data about how often such charge reductions occur, it seems likely that plea bargains entailing these sorts of charge reductions are fairly routine.

Prosecutors possess a wide array of tools that enable them to reduce charges in ways likely to result in substantially enhanced plea discounts. Not only may prosecutors simply permit guilty pleas to offenses carrying substantially reduced sentences, they may select charges tactically to expand the sentence differential when doing so provides desired bargaining leverage. For example, prosecutors may (and do) offer

average reward for pleading guilty, separated from any additional discount motivated by evidentiary problems, was 1.6 crime classes. HANS ZEISEL, THE LIMITS OF LAW ENFORCEMENT 35 (1982).

56. See Wright & Engen, supra note 54, at 1938 (noting lack of systematic empirical research on the frequency of prosecutorial charge reductions or their impact on sentence).

57. See JAMES S. KUNEN, "HOW CAN YOU DEFEND THOSE PEOPLE?" THE MAKING OF A CRIMINAL LAWYER 95 (1983).

58. See id. at 167–68 (discussing case of a client indicted for first-degree murder, armed robbery, and carrying a pistol without a license, who plead guilty to second-degree murder while armed, and robbery).

59. See VA. CRIM. SENT’G COMM’N, supra note 55, at 47 & figs.41 & 42 (showing that median sentence for first-degree murder conviction of offenders with prior criminal history is 43.2 years, while second-degree murder conviction of same category offenders is 21.9 years).

60. See U.S. SENT’G COMM’N, STATISTICAL INFORMATION PACKET tbl.7 (2006), available at http://www.uscs.gov/JUDPACK/2006/1cB6.pdf (showing that national federal median sentence for manslaughter is thirty-seven months, and for murder 240 months).

61. See Wright & Engen, supra note 54, at 1938–39 (reporting data from North Carolina indicating that “roughly half of all felony cases that resulted in conviction” represented charge reductions from initial charges filed, and that these charge reductions had a “large effect on average sentence severity”).

62. See Jon M. Sands, Book Review, FED. LAW., May 2004, at 55, 56 (reviewing
defendants with criminal histories opportunities to avoid career criminal “three-strikes” sentences in exchange for guilty pleas. They can substitute a charge not subject to a mandatory minimum for one that is, they can “stack” charges carrying mandatory minimums in order to threaten or impose dramatic increases in mandatory sentences after a trial conviction, or they can make available safety-valve provisions that waive statutory minimums to defendants who plead guilty. In states like California, the penal code gives prosecutors flexibility to charge some crimes either as felonies or misdemeanors. Where a defendant commits a so-called “wobbler” offense, the difference between going to trial and pleading guilty might mean the difference between a felony theft conviction carrying substantial prison time and a misdemeanor theft conviction and probation. These tools only bolster other mechanisms, such as “substantial assistance” provisions, which permit prosecutors to directly obtain discounted sentences for defendants who plead guilty.

Thus, although Professor Birke may well have been correct in concluding that plea discounts approaching 80% may often be required to induce loss-averse defendants to plead guilty in weak cases, sufficient data exists to suggest that plea discounts of that magnitude are common, if not routine. Boundedly-rational defendants may have substantial difficulty estimating whether the probability of conviction in their case is 50% or 90%, and thus might well be quite insensitive to marginal differences in plea offers. However, where defendants are offered the opportunity to avoid a 600% trial penalty, even substantial variances in

GEORGE FISHER, PLEA BARGAINING’S TRIUMPH: A HISTORY OF PLEA BARGAINING IN AMERICA (2003)) (noting that in author’s experience as an assistant federal defender that the prosecutor has power in drug cases to select charges so that the defendant faces five years, ten years, forty years, or life in prison).

63. See David Bjerk, Making the Crime Fit the Penalty: The Role of Prosecutorial Discretion Under Mandatory Minimum Sentencing, 48 J.L. & ECON. 591, 593 (2005) (providing empirical data demonstrating that prosecutors evade three-strikes laws by disproportionately charging lesser offenses against offenders who otherwise would be subject to three-strikes sentences).

64. See Sands, supra note 62, at 56 (noting that federal firearm counts can be stacked so that defendant with co-defendant carrying firearm might face life term).

65. Safety valve provisions often permit judges to avoid imposing mandatory minimum sentences. See 18 U.S.C. § 3553(f) (2000); Nancy J. King, Judicial Oversight of Negotiated Sentences in a World of Bargained Punishment, 58 STAN. L. REV. 293, 294 (2005) (noting that prosecutors’ charging decisions determine whether safety valve provisions and other reductions apply); Weinstein, supra note 22, at 807 n.68 (discussing application of federal safety-valve provision to first time offenders).

66. King, supra note 65, at 294.
estimated probabilities fail to undermine the rational inducement to plead guilty.\textsuperscript{67} Rationality may be bounded, but it is not inoperative. Large sentencing differentials dramatically reduce ambiguity by exaggerating the penal consequences of the choice to contest a criminal charge, and thus make it easier for even boundedly-rational and loss-averse decision makers to make a utility-enhancing decision to plead guilty.

2. Illusory Checks on Plea Discount Magnitude

Assuming the plea discount is as large as the data indicate it to be, how is it possible that such plea discounts can survive the many checks and constraints identified by Professor Birke? The answer, I suspect, is that these checks are either wholly illusory or have been compensated for in the evolution of the plea bargaining system. First, political checks on the plea bargaining practices of most DAs are likely much weaker than Birke's argument supposes for at least two reasons. In all but a handful of high-visibility cases, the general public is probably not concerned with, or even aware of, the dispositions of criminal cases. The same is not true in high-visibility cases, and therefore in those cases prosecutors (and judges) are less likely to negotiate unduly lenient deals.\textsuperscript{68} Because only a tiny number of cases ever crack the media radar screen, however, these high profile cases can be handled in atypical ways.\textsuperscript{69} In all the rest, most prosecutors have virtually unchecked

\textsuperscript{67} This was precisely the deal offered to Ian Weinstein's client, James Worth. See Weinstein, supra note 22, at 799. Worth was charged with conspiracy to sell five kilograms of cocaine. \textit{Id.} at 793. His likely sentence after conviction at trial was ten to twelve years, \textit{id.} at 806–07, and given the strong evidence, the likelihood of conviction was over ninety percent. \textit{Id.} at 806 n.66. Although, as Professor Weinstein recounts, Mr. Worth was initially reluctant to plead guilty, \textit{id.} at 830, and exhibited several cognitive biases in reaching that estimation—including overconfidence, \textit{id.} at 829, representativeness bias, and egocentric bias—he ultimately came to see the merits of pleading guilty. \textit{Id.} at 809–15. After entering a cooperation agreement, Worth ultimately received a sentence of twenty-two months time served. \textit{Id.} at 831. Had he gone to trial, been convicted, and sentenced to the upper end of the estimated range, the trial penalty would have exceeded 600%.

\textsuperscript{68} Although I lack empirical data to verify my intuition, I am confident that criminal cases involving celebrities are resolved by plea bargains far less often than cases of equal seriousness involving non-celebrities.

\textsuperscript{69} The recent controversy surrounding hotel heiress Paris Hilton's travails following a D.U.I. conviction illustrate the point. In the Hilton case, a furor erupted following L.A. County Sheriff Lee Baca's decision to release Hilton from prison and to permit her to serve the remainder of her forty-five-day jail term in home confinement. Sharon Waxman, \textit{Celebrity Justice Cuts Both Ways for Paris Hilton}, N.Y. TIMES, June 9, 2007, at A1. Such sentence modifications in misdemeanor cases are routine due to overcrowding in L.A. county prisons. \textit{Id.} In Hilton's case, however, the sentencing judge intervened and ordered Hilton to
freedom to negotiate criminal charges in whatever way they believe will maximize utility. Cognitive research suggests that freedom will translate into more generous compromise offers than straightforward utility maximization theory would otherwise predict. Because a plea bargain represents a gain from the status quo to a prosecutor, her bargaining decisions will be more risk averse, thus providing further explanation for the large documented sentencing differentials noted above.\(^{70}\)

Admittedly, even though the public may not generally be aware of individual case dispositions through the media, it might nonetheless come to perceive that cases are being settled on the cheap and that criminals are being "under-punished" through the accretion of anecdotal accounts of persons directly or indirectly involved in cases as victims, witnesses, jurors, or their friends and relatives. Although under-punishment is a consistent criticism made by opponents of plea bargaining,\(^ {71} \) it is not clear how strongly that view persists. Indeed, the body of critical weight now leans overwhelmingly toward the view that defendants are, if anything, over- rather than under-punished, and both surveys and sentencing behavior demonstrate that most judges also believe that defendants are over-punished as a result of sentencing guidelines and mandatory minimum sentences.\(^ {72} \)

Second, systematic over-punishment is not inconsistent with a high plea discount rate. Because the plea discount rate is a product of the sentencing differential between plea and trial sentences, plea sentences may be both fully proportional to criminal wrongdoing and yet substantially discounted, as long as the alternative trial sentence is proportionately harsher. The dramatic increases in sentence length over

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\(^{70}\) The contrasting risk tolerances of parties depending on whether they are seeking gain or defending against loss is illustrated in the literature documenting divergences in bargaining strategies among plaintiffs and defendants in civil litigation. See Rachlinski, supra note 23, at 159 (reporting data showing that plaintiffs were more risk averse than defendants in bargaining; while many plaintiffs were willing to accept negotiated settlements below their expected value, more defendants adopted risk-seeking strategies by refusing to make sufficient settlement offers to avoid trial).


\(^{72}\) See, e.g., Joanna Shepherd, Blakely's Silver Lining: Sentencing Guidelines, Judicial Discretion, and Crime, 58 HASTINGS L.J. 533, 559 (2007) ("Surveys of federal judges and many federal judicial opinions demonstrate that many federal judges perceive federal sentencing guidelines to be too harsh and inflexible.").
the past several decades\textsuperscript{73} are consistent with the goals of muting plea bargaining critics' claims that plea sentences are too lenient while preserving the enormous efficiency gains inherent in plea bargaining.

Third, precisely because sentencing guideline systems and mandatory minimums have tended to increase the severity of trial sentences over what judges not bound by such regimes would impose, their main effect has been to simply make trial sentences harsher. They can have the discount-limiting effect that Professor Birke attributes to them only if they also prevent prosecutors from making (and judges from accepting) plea offers below the guideline range or mandatory minimum term. However, ample evidence indicates that prosecutors are not ultimately constrained by guidelines or mandatory minimums in crafting charges that result in desired penal outcomes. As Jeffrey Standen has observed, prosecutors' enormous discretion over charging and the complexity and redundancy of most criminal codes allows prosecutors virtually total control over trial sentence outcomes.\textsuperscript{74} The same prosecutorial discretion, assisted by legislative efforts in some cases, allows prosecutors to evade mandatory minimums that otherwise might prevent prosecutors from crafting plea deals below the mandatory minimum term. Sentencing guidelines and mandatory minimums almost certainly deepen the sentencing differential rather than minimize it.

If criminals are not being under-punished despite the existence of a large sentencing differential, that can only mean one thing: defendants are being deterred from exercising their trial rights because of a substantial trial penalty. As Professor Birke observes, the existence of a trial penalty does raise substantial constitutional questions, but that is not grounds to conclude that a trial penalty does not exist.\textsuperscript{75} Indeed, although the Supreme Court has paid lip service to the notion that trial sentences may not be increased to punish a defendant for exercising his right to trial, it has nonetheless unambiguously affirmed charging practices that underscore the unchecked freedom of prosecutors to do

\textsuperscript{73} Id. at 536 ("[G]uidelines have tended not only to reduce the variation in sentences, but also to increase the average sentence lengths.").

\textsuperscript{74} Jeffrey Standen, Plea Bargaining in the Shadow of the Guidelines, 81 CAL. L. REV. 1471, 1506–08 (1993) (illustrating the ability of prosecutors to control sentencing outcomes under federal sentencing guidelines through tactical charging decisions); see also King, supra note 65, at 294 ("Both in bargaining over statutory ranges and in bargaining over sentences within statutory ranges, parties have easily escaped from the constraints of the Guidelines.").

\textsuperscript{75} Given that a trial penalty is simply another name for a plea discount, the embrace of plea discounts is irreconcilable with a condemnation of trial penalties. See Birke, supra note 9, at 228–29.
just that. Enormous sentence differentials may raise serious constitutional concerns, but those concerns have not moved courts to place meaningful restraints on prosecutorial bargaining tactics that effectively penalize defendants for exercising their right to trial.

In short, there is ample evidence to support the argument that criminal defendants routinely receive extremely “good deals.” Although a variety of cognitive biases undoubtedly lead defendants to prefer trial over guilty pleas, sentencing differentials that make guilty pleas look not only better, but better by orders of magnitude, go a long way toward helping to overcome them. Even strongly loss-averse defendants might start to doubt the wisdom of holding out for trial in the face of these enormous differentials.

Still, like Professor Birke, I suspect that “good deals”—even ones that are better by orders of magnitude—do not provide the whole explanation for the high plea rate. After all, such deals are not available in all cases, and defendants’ resistance to pleading guilty is not only a product of loss aversion, but also of a whole range of cognitive traits that work in concert to inhibit plea bargaining. An explanation for the high plea rate thus requires consideration of several additional facets of the criminal justice system—especially as manifested in large urban jurisdictions—that further counter cognitive biases that might otherwise lead to insistence on trial.

B. Overcoming Self-Serving Bias by Minimizing Outcome Uncertainty

A rational actor’s choice to plead guilty turns not only on the assessment of potential penalty upon conviction, but also on the likelihood of conviction at trial. Substantial uncertainty regarding the probability of conviction, like uncertainty regarding its consequences, may encourage loss-averse defendants to gamble on trial. Moreover, cognitive theory predicts that as a result of self-serving bias, confirmation bias, and overconfidence, defendants will harbor unrealistically positive assessments both of their chance of acquittal and of the likelihood of a light sentence. This section reviews several features of modern criminal process that work to blunt those tendencies.

76. See Bordenkircher v. Hayes, 434 U.S. 357, 365 (1978) (upholding life sentence for defendant charged with uttering a forged check for $88.30, where defendant initially declined plea offer of five years and was reindicted under habitual offender statute).
77. See Bibas, supra note 5, at 2523.
1. Minimizing Probability of Conviction Uncertainty

Access to discovery in criminal cases is far more constrained than it is in civil cases. As a result, the parties in criminal cases have less information about the evidence that will come out at trial than do parties in civil cases. This information deficit impedes plea bargaining by making it more difficult to predict trial outcomes. Limited discovery in criminal trials is a longstanding feature of criminal law that reflects and responds to the fundamental asymmetries of criminal litigation. Whereas in civil litigation both parties are entitled broad and equal access to all relevant information in the possession, custody, or control of the other party, the constitutional privilege against self-incrimination restricts state access to the most relevant information in most criminal cases—the defendant’s own testimony—even while the “beyond a reasonable doubt” standard places a heightened burden of proof on the state to secure and present relevant evidence. The limited prosecutorial obligation to share evidence with the defendant helps to level the playing field. In addition, many jurisdictions utilize reciprocal discovery rules that take advantage of the state’s limited production obligations to enhance its ability to induce defendants to turn over information while maintaining relative information equilibrium between the two sides.

This, however, gives rise to a puzzle. Notwithstanding that discovery rights in criminal litigation are limited, as a matter of policy many prosecutors’ offices voluntarily maintain “open-file” discovery policies that allow defense attorneys ready access to the information and evidence in the prosecutor’s file even where the law does not require it. Given limited formal discovery requirements in criminal cases in most jurisdictions, open-file discovery practices seem odd, or at least worthy of examination, because they represent a voluntary relinquishment of a tactical litigation advantage.

78. See United States v. Ruiz, 536 U.S. 622, 629 (2002) (“[T]he Constitution does not require the prosecutor to share all useful information with the defendant.”); Weatherford v. Bursey, 429 U.S. 545, 559 (1977) (“There is no general constitutional right to discovery in a criminal case . . . .”); Mary Prosser, Reforming Criminal Discovery: Why Old Objections Must Yield to New Realities, 2006 Wis. L. REV. 541, 549 (describing discovery of criminal cases as limited and noting that insufficient discovery in criminal cases contributes to both wrongful convictions and unfair sentencing).

79. See Ruiz, 536 U.S. at 629 (acknowledging that “the more information the defendant has, the more aware he is of the likely consequences of a plea, waiver, or decision, and the wiser that decision will likely be”); Bibas, supra note 5, at 2494.

80. See Bibas, supra note 5, at 2494.

81. See Prosser, supra note 78, at 593 (stating that most federal prosecutors’ offices and numerous state jurisdictions report having “some sort of open file” discovery policies).
The reasons many prosecutors support liberal informal discovery rules are undoubtedly complex. In his classic study of plea bargaining, Milton Heumann described how prosecutors used informal discovery to influence defense bar tactics and to discourage confrontational litigation methods. Defense attorneys learn that there are costs, often significant, to invoking formal procedures such as motions practice or jury-trial demands to secure rights to which their clients are legally entitled, including loss of access to informal discovery. Informal resolution of disputes is encouraged by prosecutors to relieve both sides of the need to respond to motions and thereby save resources. Defense attorneys who refuse to observe the unwritten rules lose access to previously open files.

Open-file policies may be useful not only to minimize motions practice and pretrial process, but also to combat the defendant's cognitive resistance to pleading guilty. By opening up the evidentiary files early in the criminal process, prosecutors (and defense lawyers) can more readily demonstrate case strength to defendants. Increasing the defendants' understanding of the evidence, and thus the accuracy of their estimates of the likelihood of conviction, facilitates plea bargaining by reducing the area of potential disagreement between the parties as to case values.

Informal discovery mechanisms, moreover, offer benefits over more formal discovery rules. Although greater information allows defendants to make better estimates about trial outcomes, the effects of confirmation and self-serving bias might limit the persuasive effect of enhanced discovery were it provided equally in all cases. Research on confirmation and self-serving bias suggests that defendants will evaluate new evidence as confirmatory of their pre-existing, overconfident assessment. However, selection biases of defendants can be combated through exercise of control over the information that is shared. Informal discovery practices permit prosecutors greater discretion to

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82. See, e.g., Panel Discussion: Criminal Discovery in Practice, 15 GA. ST. U. L. REV. 781, 805 (1999) (stating that "prosecutors disagree a lot about discovery" and that their views regarding discovery "vary widely").
84. Id. at 74.
85. Id. at 74-75.
choose when they will grant liberal discovery and to selectively withhold information in some cases simply by "neglecting" to put it into the file. Because prosecutors do not have to respond to formal motions, they risk little by such selective omission. Because the information provided through open-file practices will usually be limited to inculpatory information that bolsters the strength of the prosecutor's case, open-file policies almost certainly counter self-serving bias by undermining defendants' tendencies to ignore or discount information that conflicts with their preconceived, optimistic views.

The cognitive impact of open-file discovery policies can be further magnified through use of devices such as "reverse proffers"—that is presentations by the prosecutor of the evidence as the state would use it directly to the defendant. Although reverse proffers clearly require a greater commitment of prosecutorial resources, and thus likely are reserved for white collar and other particularly time-intensive cases, the tactic can serve as an especially effective debiasing technique because it facilitates a defendant's ability to overcome her tendency towards over-optimism and see the case from the prosecutor's or the jury's perspective.

Of course, even with perfect access to the file, calculating probabilities of conviction remains an imprecise science. No one can say for certain what will happen in any particular case should it go before a

87. See Prosser, supra note 78, at 593 n.215 (noting survey data showing "many working exceptions to the stated 'open file' policy" employed by Wisconsin prosecutors).

88. Of course, there is a reputational cost to using deceptive practices. However, the reputational costs of infrequent selective deception may not be very high.

89. See John G. Douglass, Balancing Hearsay and Criminal Discovery, 68 FORDHAM L. REV. 2097, 2141 (2000) ("Prosecutors aiming for guilty pleas have the strongest incentive to disclose in cases where their evidence is most overwhelming. In the weaker cases, the very ones where discovery is most likely to make a difference to the defendant, there is less incentive for a prosecutor to disclose and more reason to play 'hard ball' when the rules permit it."); Prosser, supra note 78, at 593 n.215 (reporting results of survey by Wisconsin law students of local prosecutors offices finding, inter alia, that most discovery in criminal cases was the product of informal procedures such as open-file policies and that "most of the information disclosed was inculpatory rather than exculpatory").

90. See Bibas, supra note 5, at 2525 (describing reverse-proffers as an effective technique to overcome resistance to plead guilty because "defendants are often impressed to hear prosecutors' forceful explanations of how the government could convict them at trial"); Mary Patrice Brown & Stevan E. Bunnell, Negotiating Justice: Prosecutorial Perspectives on Federal Plea Bargaining in the District of Columbia, 43 AM. CRIM. L. REV. 1063, 1066 (2006) (explaining that "AUSAs in the USAO-DC routinely make pre-indictment 'reverse proffers'" to the targets of investigations).

91. See Bibas, supra note 5, at 2523 ("By far the most successful debiasing technique is to have clients consider the opposite.").
jury; the vagaries of trial are too great even for experienced prosecutors and defense lawyers to perfectly anticipate. This ambiguity might therefore lead overconfident defendants to systematically overestimate their chances at trial and to reject plea bargains even when the probabilities seem skewed heavily toward pleading guilty. Open-file discovery policies and the strategic use of reverse-proffers both help to reduce ambiguity and shift the defendant’s perspective. Thus, they facilitate plea bargaining.

A second feature of discovery law further enhances the effects of liberal informal discovery policies on facilitating guilty pleas. While most prosecutors are willing to permit defendants access to the incriminating evidence in the file precisely because such access facilitates guilty pleas, open access to exculpatory evidence is more problematic. Although Brady v. Maryland purports to require prosecutors to turn over exculpatory evidence to criminal defendants, Brady has been consistently construed in ways that minimize its adverse impact on plea bargaining. For purposes of this Essay, I will note only two. First, the timing requirements imposed by Brady arguably obviate any need to produce exculpatory evidence prior to entry of a guilty plea. Brady requires production of exculpatory evidence at trial; the Court has refused to tighten Brady’s disclosure requirements to ensure production of exculpatory evidence prior to entry of a guilty plea. As a result, at the time plea bargaining occurs, many defendants will have a fresh and vivid picture of the incriminating evidence after having reviewed it or heard the prosecutor present it during plea negotiations. As a consequence, the negative facts disclosed through open-file discovery are likely to play a larger role in the defendant’s evaluation of likely outcomes than any positive facts based on exculpatory evidence that have not yet been turned over, even if the defendant is theoretically aware of that evidence. Second, the “materiality” limitations the Court has imposed on Brady’s reach necessarily mean that marginally relevant exculpatory evidence will never be turned over to defendants, even while similarly marginal incriminating evidence is. Thus, current

93. See, e.g., United States v. Ruiz, 536 U.S. 622 (2002) (holding that prosecutors do not have constitutional obligation under Brady to produce impeachment evidence prior to plea hearing). The Court’s holding in Ruiz applied to production of impeachment material rather than material evidence of “factual innocence.” Therefore, it remains unclear if, and how far, a prosecutor’s duty to disclose such evidence extends under Brady prior to a plea hearing.
94. Brady, 373 U.S. at 87-88.
discovery rules enhance the prosecutor's ability to demonstrate the strength of her case and hide its weaknesses, which in turn makes it easier to sell plea bargains to overconfident and egocentric buyers.

2. Minimizing Sentencing Ambiguity

Ambiguity, of course, attends both the guilt and sentencing phases of a criminal trial. Just as relatively liberal discovery policies reduce guilt-phase ambiguity, the two most prominent recent developments in criminal sentencing practices—the spread of sentencing guidelines and the enactment of mandatory minimum sentences—have had similar ambiguity-reducing effects on sentencing outcomes. Defendants may not know how likely it is that they will be convicted at trial, but it is relatively easy for defense lawyers to demonstrate the limited range of sentences that will accompany a conviction by referencing applicable guidelines or statutory minimums. Guidelines systems and mandatory minimums counteract the tendency of defendants to believe that, if convicted, they will (or at least might) receive relatively light sentences. With guideline sentencing tables and mandatory minimum sentencing statutes in hand, defense lawyers can more easily demonstrate to their clients the harsh consequences of a guilty verdict at trial and, therefore, convince them more often of the relative advantages of accepting a plea bargain.96

By minimizing the degree of ambiguity of outcomes at the time of plea bargaining, boundedly-rational defendants with a tendency toward overconfidence, self-serving bias, and confirmation bias can be swayed to accept plea bargains more easily than if substantial outcome uncertainty remains. It is almost certainly not coincidental that the modern trend toward increasingly determinate sentencing schemes (United States v. Booker97 notwithstanding) has paralleled the increasing prevalence of plea bargaining.98 The further reduction of sentencing

(holding that Brady obligations only apply to the failure to disclose exculpatory evidence that passes materiality threshold).

96. See, e.g., Weinstein, supra note 22, at 818 (explaining to client that guideline sentence upon conviction after trial was seventy to eighty-seven months, and applicable mandatory minimum was ten years, prompting client to exclaim: "That is too much time . . . . Damn, that is too much time.").


98. See Jennifer L. Mnookin, Uncertain Bargains: The Rise of Plea Bargaining in America, 57 STAN. L. REV. 1721, 1723 (2005) (reviewing GEORGE FISHER, PLEA BARGAINING'S TRIUMPH: A HISTORY OF PLEA BARGAINING IN AMERICA (2003)) (noting that plea bargaining did not become dominant mode of criminal adjudication until judicial discretion was checked through rise of determinate sentencing, since "the more uncertainty
ambiguity provided by guidelines and mandatory minimums further facilitates negotiated outcomes.

C. Overcoming Loss Aversion and the Endowment Effect Through Framing: Pretrial Detention and High Process Costs

The mathematics of the trial penalty suggest that most defendants need not make precise estimates of the likelihood of a trial conviction to be convinced that a plea bargain is in their interests. However, a handful of defendants, perhaps due to strong loss aversion, may cling to their biases and refuse to give up their trial right regardless of the odds. Cognitive research has demonstrated that, contrary to assumptions used in rational choice theory, decision making does not solely turn on a comparative evaluation of absolute values.99 Rather, decisions in the context of uncertainty are influenced by perceptions of gain or loss measured in reference to a perceived baseline or reference point.100 Because baselines impact perception, and thus decision making even when the baseline is arbitrarily chosen, the framing of choices can have a major impact on decision making.101 A defendant's aversion to suffer certain losses, therefore, can be countered by framing the guilty plea as a gain rather than a loss. Although people tend to take risks to avoid losses, they are much more risk averse when it comes to protecting gains. Although pleading guilty looks like a certain loss when the defendant is free at the time the plea is entered and in shackles the moment after, the perception of loss flowing from a guilty plea diminishes when the defendant is already behind bars. Accordingly, where math fails, jail almost certainly succeeds.

Substantial numbers of felony defendants are detained prior to trial. Indeed, in state courts approximately one-third of all felony defendants on average are detained pretrial, and in many jurisdictions, two-thirds or more of felony arrestees typically cannot make bail or are not given the option.102 In federal courts, approximately seventy-two percent of all

about what punishment would actually result from conviction,” the more difficult to “price” a guilty plea).


100. Id.

101. See id. at 129–40 (discussing framing effect).

102. Bogira, supra note 53, at 4; Weinstein, supra note 22, at 802 n.55 (citing Bureau of Justice Statistics, U.S. Dep't of Justice, Compendium of Federal Justice Statistics 45 tbl.3.5 (1999), available at http://www.ojp.usdoj.gov/bjs/pub/pdf/cfjs9903.pdf (“In 1999, 70.9% of the narcotics trafficking defendants who had a detention hearing were [denied bail].”)).
felony defendants are detained pretrial. A large proportion of defendants thus make the decision to plead guilty not while they remain “on the street” but from behind bars, minimizing the perception of a guilty plea as a loss from the status quo baseline. The psychological effect of pretrial detention can be quite powerful. Indeed, as one experienced public defender noted, a defendant who wins pretrial release ironically may make worse plea bargaining choices because it is much more difficult for defendants who are not detained pretrial “to ‘step in’—that is, to go from being free to being an inmate” by accepting a favorable plea bargain—than it is for a defendant who is already locked up to accept the same deal. Where the expected sentence following a guilty plea is time served, and the cost of holding out for a trial is continued detention, the perception that a guilty plea is a gain and trial a loss is virtually overwhelming.

Needless to say, most criminal defendants do not pay out-of-pocket for their legal representation. Approximately eighty percent of criminal defendants are indigent and thus receive publicly financed legal counsel. This does not mean that indigent defendants do not pay for process; they simply pay in a different currency. Pretrial detention is the most onerous process cost among the many burdensome process costs imposed on criminal defendants. As numerous first-hand accounts of the criminal justice system attest, even if defendants manage to make bail or are released on their own recognizance before trial, the costs of contesting a criminal charge can be astounding. Tedious lines to get through courthouse security, interminable waiting for cases to be called, strict limitations on what can be brought into the courtroom (e.g., no food, no reading materials to diminish the tedium), and seemingly endless continuances (that require working defendants and accompanying family members to burn up vacation and sick days, incur repeated transit costs, and require childcare arrangements to be made


104. DAVID FEIGE, INDEFENSIBLE: ONE LAWYER’S JOURNEY INTO THE INFERNO OF AMERICAN JUSTICE 217 (2006) (noting that pretrial release can have the adverse consequence of “push[ing] many defendants to risk a trial rather than surrender” by accepting a plea bargain that reduces their likely punishment).


106. Feige, supra note 104, at 157 (“It is the interminable waiting, as much as anything else, that grinds people down.”).
and paid for, etc.) can make the cost of fighting a criminal charge appear greater than the cost of pleading guilty. All of these process costs conspire to dissuade defendants from exercising their right to a trial. As one public defender explained:

> [O]nce you understand . . . how high the frictional costs of fighting a criminal case really are, the guilty pleas of the innocent are not only predictable, but also seem a natural product of the way the system is designed. Even without the threat of jail, coping out isn’t an irrational choice.  

These high process costs explain why almost every misdemeanor defendant, in the end, resolves his case with a guilty plea. Where “the process is the punishment,” minimizing process is the best way to minimize punishment. Pleading guilty is almost always the best route to truncating the process. High process costs also undoubtedly contribute to the high plea rate in felony cases.

Even defendants incarcerated before trial pay additional process costs to contest a criminal case. Although one might assume that a jailed defendant would have little to lose in terms of “frictional costs” by contesting a case—after all, what else does the jailed inmate have to do?—in fact, even routine court appearances are often onerous for the incarcerated defendant. In many urban systems, on court day defendants are rousted from their cells before sunrise and transported to the “bullpens”—crowded, dirty, and dangerous holding cells adjoining the courthouse—where they spend entire days waiting for a visit with a lawyer that may last as little as a few seconds, and an equally short—or shorter—appearance before a judge that inevitably ends with the grant of yet another continuance. While they wait in the bullpens, defendants are subjected to drug sniffing dogs that bite, strip searches, and numerous other indignities and rough treatment. Following their court appearance, defendants then return to the bullpens only to spend several more hours subjected to the same miserable conditions before finally being returned to their cells, hungry and often too late for dinner.

Pretrial detention coupled with the unrelenting misery endemic to
most urban criminal court appearances are two ugly facets of the system, but they serve an obvious functional purpose. By making the exercise of legal rights so tangibly and immediately painful, high process costs reframe the decision to plead guilty. A plea bargain presents an opportunity to cut short pretrial detention and to end an interminable and costly legal process. Thus, what might at first look like a loss aversion triggering event is reframed as a gain-protecting one. Similarly, although the endowment effect suggests that a defendant charged with a crime should initially place a high value on his right to a jury trial, pretrial detention and an onerous legal process—by default or by design—undermine that assessment by turning the right to trial into a costly liability rather than an asset. So reframed, the cognitive effects of loss aversion and the endowment effect point toward, not away from, the decision to plead guilty.

The effects of pretrial detention and high process costs are further enhanced by the use of high-pressure bargaining tactics that mirror the ubiquitous market ploys that retailers everywhere use to induce buyers to part with their money. “Today-only” and “going-out-of-business” sales are cognitive devices, the effectiveness of which has been empirically verified through ample business experience. Such sale tactics are explainable as applications of the principles of loss aversion, the endowment effect, and reframing because they recast the retailer’s offer from a loss (of the opportunity to shop for a better deal) to a potential gain (of the opportunity to get today’s sale price rather than tomorrow’s higher one). Prosecutors and judges similarly exploit the one-day (and sometimes one-minute) sale tactic to induce reluctant defendants to plead guilty. Every defense attorney (and prosecutor) can tell stories of defendants forced to decide virtually on the spot, or within absurdly short time limits, whether to accept or reject a plea offer with consequences measured in years or decades.110 The routine use of high-

110. For instance, reporter Steven Bogira recounts a plea deal worked out with a defendant in the midst of trial. BOGIRA, supra note 53, at 80–84. Charged with murder, the defendant faced a trial sentence ranging from twenty to sixty years. Id. After the judge permitted the state to reopen its case to put on the eyewitness testimony of a witness to the crime, defense lawyers worked out a plea deal with the judge that would effectively save the court two additional days of trial time. Id. The judge guaranteed a thirty-eight-year sentence if the defendant folded mid-trial. Id. The defendant had twenty minutes to consider the one-day only offer. Id. Because of Illinois rules regarding “good conduct” time, a thirty-eight-year sentence effectively translated at the time to a nineteen-year sentence of actual time, minus 2.5 years for time-served. Id. The discount for abandoning trial, therefore, was actually 11.5 years of actual prison time. Id. The defendant took the plea. Id.; see also DAVID HEILBRONER, ROUGH JUSTICE: DAYS AND NIGHTS OF A YOUNG D.A. 233 (1990)
pressure bargaining tactics and exploding offers, and the ever-present threat that next time one might find himself or herself standing before an even more vindictive or unreasonable judge, places added psychological stress on criminal defendants.

Sentencing guidelines and mandatory minimums also likely help to adjust the defendant's cognitive framing and anchoring of the situation in ways that make plea bargained outcomes look more desirable. Sentencing guidelines and mandatory minimums provide a firm reference point that allows bargained-for discounts to be more easily presented as gains rather than losses from the status quo, helping to neutralize the effects of loss aversion.\textsuperscript{111}

Given the plethora of devices that function to make the prospect of fighting a criminal charge costly, burdensome, and painful, and that quickly change a defendant's conception of the status quo, it may well be that loss aversion not only does not impede plea bargaining in the vast majority of cases, but actually facilitates it. Defendants who perceive their exercise of a trial right as the loss of a favorable plea bargain will be much less likely to take risky bargaining positions and may agree to worse terms than a non-loss-averse defendant would accept.

\textbf{D. Correcting Over-Discounting: Lawyers' Roles in Facilitating Guilty Pleas}

In his effort to reconcile loss aversion and guilty pleas, Professor Birke concluded that the strongest explanation for the high guilty plea rate notwithstanding loss aversion was systematic bad advice from defense counsel.\textsuperscript{112} Although numerous structural features of the defense bar undoubtedly are in tension with the lawyer's duty to zealously advocate for clients, there is no data showing that competent or exceptional defense lawyers go to trial more often than their less competent peers.\textsuperscript{113} Indeed, although many good criminal defense

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(designated by court to make decision regarding plea offer of 1.5 to three years (maximum sentence after trial was 3.5 to seven years) while standing before judge at arraignment hearing; request for additional time to "think about it" summarily denied).

111. See Bibas, supra note 5, at 2519 ("If the initial charge and sentence serve as anchors and baselines, any prosecutorial concessions look like discounts or savings—wins for defendants instead of reduced losses.").

112. Birke, supra note 9, at 247.

113. Although there is at least anecdotal data suggesting that there exists a breed of lawyers who do nothing but plead out clients to collect fees, this class of lawyer undoubtedly
lawyers are eager to try cases, their own assessments of their client's interests often dictate that they advise clients to plead guilty. Contrary to Professor Birke's conclusion, criminal defense lawyers who encourage their clients to plead guilty probably enhance the rationality of defendant decisions. Defense lawyers play an integral role in guiding criminal defendants to make more rational plea bargaining decisions by providing defendants with more accurate estimates of the strength of the prosecutor's case, the likely consequences of conviction, and the "going rates" in the jurisdiction for plea bargains. Defense lawyers thus provide the basic tools that permit defendants to make minimally rational decisions about whether to accept a plea bargain: an assessment of the value of the defendant's trial rights. Indeed, the model of plea bargaining as a rational market between players making informed economic choices would be entirely implausible without the assumption of the defense bar's role in guiding defendants to make reasonably rational decisions.

Defense lawyers play an equally important role in combating the cognitive biases of their clients to enable them to make economically rational choices. By using a variety of persuasive techniques, such as helping the defendant to visualize the manner in which the evidence will be used in court, defense lawyers can help to "de-bias" defendants and minimize cognitive errors such as overconfidence and egocentricity. For instance, defense lawyers routinely report that one of their most important functions is to correct their clients' tendencies to overdiscount. Some defendants discount the future at irrationally high

114. See Weinstein, supra note 22, at 805 ("For me, zealous advocacy for my clients charged with federal narcotics offenses has become zealous harm reduction. Most of my clients are going to be punished. I see myself as trying to separate out the many likely pleas from the very few cases which should be tried. Once those two groups are separated, the tasks are to win the trials and minimize the sentences for those who plead or are found guilty.").

115. See, e.g., Alschuler, Defense Attorney's Role, supra note 34, at 1309 (quoting a "leading manual on the defense of criminal cases" counseling that lawyers employ "rather forceful language" to persuade clients to plead guilty, and that "[i]t may even be a lawyer's duty to use the kind of language illustrated by a recent Massachusetts case: 'The jury will fry your ass.' 'You're going to die if you take the stand.' 'You will burn if you do not change your plea.' 'The jury wants your blood.'").
rates, leading them to make decisions they soon come to regret. As noted above, the decision to roll the dice against the odds and stand trial in hope of winning an unlikely acquittal is in some cases the product of discounting error or bounded willpower. Even defendants who correctly understand the relative benefits of pleading guilty might nonetheless place too heavy of an emphasis on their present well-being at the expense of their future well-being, while others might lack the willpower to make the utility-enhancing choice that they know will better enhance their expected long-term utility. Effective lawyering therefore includes changing the discounting preferences or bolstering the bounded willpower of defendants.

Selling guilty pleas to clients, in other words, is one of a defense lawyer's most important jobs. Setting aside the structural defects that plague indigent defense systems—gross under-funding and client-agent conflicts of interest to name only two—defense lawyers contribute to the high rate of plea bargaining simply because they perceive it to be their appropriate function to correct their clients' discounting errors, among other cognitive biases. Because of the well-documented under-financing of the criminal defense bar,


117. James Kunen recounted one such effort involving Roberto Lewis, a seventeen-year-old client who had confessed to a robbery-murder. KUNEN, supra note 57, at 148–49. The state's evidence was overwhelming—the defendant almost certainly would be convicted at trial, and if convicted, would receive a mandatory term of twenty years to life. Id. His lawyers concluded that his only hope was to plead guilty and hope that the judge sentenced him as a juvenile rather than as an adult. Id. The client, however, refused to enter a guilty plea. Id. A week before trial, Kunen met with his client, telling him to “picture this.” Id. He proceeded to describe, in detail, the basketball careers of two imaginary kids, from their rookie years through retirement, running consecutive to one another. Id. “You take those two careers, those two whole lives in basketball, that's twenty years...‘Let me put it this way,’ I said. ‘It's forever.'” Id. Kunen then described the plea alternative:

“Do you have a high school diploma?”

“I'm workin’ on that now.”

“You could work on that, then you could start taking college credits. And if you were studying and doing well and behaving yourself, they could take account of that, and they could release you. In maybe five years, seven years, ten years, you could get out. It's a long time. But, the point is, what you do could affect your life. If you don't plead guilty, you are going to do twenty years.”

Id. Roberto took the plea. Id.

118. See AM. BAR ASS'N STANDING COMM. ON LEGAL AID & INDIGENT DEFENDANTS, GIDEON'S BROKEN PROMISE (2004), available at http://www.abanet.org/
overworked and underpaid lawyers frequently have little time or inclination, and virtually no incentive, to do much else.

IV. CONCLUSION

Pleading guilty to a serious criminal offense is an intuitively unappealing choice that most people can be expected to strongly resist initially. This intuition is supported by insights gained from cognitive research. But just as cognitive research casts critical light on conventional economic models of plea bargaining that assume plea bargains represent the rational product of predictable market forces, it also provides a functional explanation for many of the most important recent developments in criminal law, as well as some of the most unattractive features of typical urban criminal justice systems. The need to overcome criminal defendants' cognitive resistance to plead guilty helps to account not only for the popularity among prosecutors and politicians of determinate sentencing and mandatory minimums, but also for the prevalence of pretrial detention, the harsh rigors of the courthouse "bullpens," the routines employed by prison authorities and court officials to transfer jailed criminal defendants back and forth to the courthouse for court appearances, the long lines, endless waits, and strict conduct rules in misdemeanor courts, and the generous grants of continuances to criminal litigants. While many of the most important developments in modern criminal law—the inflation of sentences, the expansion of prison populations, the advent of sentencing guideline regimes, and the widespread adoption of mandatory minimum and career criminal sentencing provisions—undoubtedly are the product of complex political, cultural, historical, and administrative causes, the uniformity with which they contribute to the cause of inducing guilty pleas by overcoming the cognitive resistance of defendants cannot be overlooked.

Seeing the criminal justice system as an integrated plea bargaining machine that functionally works to overcome the cognitive resistance of...
criminal defendants to plead guilty helps place its component parts in perspective. Such a conception suggests that sporadic or isolated reform initiatives are not likely to succeed, at least not if their goal is to improve defendant decision making or systemic sorting accuracy. If these are the goals, what is needed is not piecemeal reform, but system-wide transformation. Indeed, recognition of the "cognitive design" of the criminal justice system should cause us to question some of the most fundamental notions regarding the function of courts and of legal process in the administration of punishment. Meaningful reform of the criminal justice system is unlikely to occur absent an abandonment, or at least a reduction, of the drive to increase systemic leverage to obtain guilty pleas while minimizing process costs. Indeed, the very notion of maximizing "efficiency" in the prosecution of crime might need to be reevaluated—a project that takes us well beyond the domain of both rational choice theory and cognitive science.