

The Use of Knowledge in the Criminal Justice System

Daniel J. D'Amico¹
danieljdamico@gmail.com

Keywords: Knowledge problem, criminal justice, crime, punishment, restitution

JEL codes: K4, N4

Abstract:

To successfully coordinate the real administration of justice with people's diverse and subjective preferences for justice, the legislative, the judicial, the police, and the penal systems must all solve “knowledge problems.” Together, these institutions serve as four key information nodes in the general provision of criminal justice: (1) legislators must define and limit the content of law; (2) judges must determine guilt and level sentences (3) police must optimize their investigations of crime and (4) wardens must decide how punishment should be carried out? This paper compares the present retributive criminal justice system with a market-driven, restitution-based system. I find that government-directed criminal justice is more often than not incapable of getting the information needed to solve knowledge problems at the critical information nodes. In contrast, I explain that a restitution-based criminal justice system solves knowledge problems at each information node. The results suggest that law enforcement reforms that leave government as the primary manager of criminal justice are bound to leave society's preferences for criminal justice wanting. Correcting government's information failure in the context of criminal justice requires eliminating its root cause: government itself.

¹ The author would like to thank the Mercatus Center for financial support. Peter J. Boettke, Peter T. Leeson and Virgil Storr provided helpful comments and suggestions throughout the writing process. Any errors or omissions that remain are the author's sole responsibility.

INTRODUCTION: THE KNOWLEDGE PROBLEM OF CRIMINAL JUSTICE.

Effective criminal justice requires information generation at four critical nodes that represent distinct stages in the management and provision of law enforcement. The first node is legislation; what should the content and limitations of the criminal law be? The second node is the judiciary; what standards should judges apply to criminal cases; how should they determine guilt in a particular case? The third node is law enforcement; when has a crime taken place, who is responsible, and how can criminals be brought to justice? The fourth node is corrections; how should society respond to crime, should criminals be punished, and to what extent? In the literature on the ethics of punishment, optimizing across these critical points is called “proportionality”² -- the response to crime should be fitted to the crime itself. I claim that restitution more so than retributive justice solves Hayekian knowledge problems³ at these critical nodes to promote and ensure proportionality in law creation, legal rulings, law enforcement, and punishment. Economic coordination is promoted through restitution because it provides a forum for the demanders of justice to express their preferences and provide financial incentives as signals to justice suppliers who spawn innovation and entrepreneurship within the market for criminal justice.⁴

Markets solve knowledge problems by relying upon the separate decisions of individual actors guided by their own self-interests. Demanders express their preferences for goods and services in the form of prices that they are willing to pay. Suppliers express their values over the resources they

2 On proportionality see Hirsch (1992) and Ryberg (2004).

3 Hayek (1945) argued that knowledge, its uses and availability, are the central problems of social coordination:

The peculiar character of the problem of a rational economic order is determined precisely by the fact that the knowledge of the circumstances of which we must make use never exists in concentrated or integrated form, but solely as the dispersed bits of incomplete and frequently contradictory knowledge which all the separate individuals possess. The economic problem of society is thus not merely a problem of how to allocate 'given' resources – if 'given' is taken to mean given to a single mind which deliberately solves the problem set by these 'data.' It is rather a problem of how to secure the best use of resources known to any of the members of society, for ends whose relative importance only those individuals know. Or, to put it briefly, it is a problem of the utilization of knowledge not given to anyone in its totality (ibid., pp. 519 – 520).

4 See Kirzner (1978 and 1996).

control through the prices that they are willing to accept for sales. However criminal justice is not provided in this manner in the US or any other advanced economy in the world today. But it is widely understood that the current system is not operating as effectively as it should.

The United States incarcerates more criminals than any other country today, throughout history, and at an unprecedented cost. In mid year 2006 the United States held 2,245,189 inmates in prison, up from 1,585,586 inmates in 1995 (Sabol et al., 2007). Poland is second for most inmates with 229 per 100,000 people compared to America's 724 per 100,000 (Walmsley, 2005). In 2005, US local governments spent over \$100 billion on criminal justice, up 396% since 1982. State governments spent over \$60 billion, up 510%, and the federal government over \$35 billion up 730% (Bureau of Justice Statistics, 2007). Crime is financially expensive, socially disruptive, and getting worse over time.

On a positive note, violent crime significantly dropped in the 1990s... but the cause is debated and unresolved. Donohue and Levitt (2006) believe legalized abortion, though tangential to criminal policy, dropped the crime rate. In contrast Lott and Mustard (1997) believe that private gun ownership deterred violent crime. Social commentators and policy makers thank the increase in prisons for incapacitating criminals from committing additional crimes, but also point out the high “social cost.” The extreme proportion of the rise in prison populations is drug related (60% of federal inmates, in 1996 and 23% of state inmates, up from almost zero before the 1980s). This brings doubt to the causal link between the rise of incarceration and the drop in violent crime (Higgs, 2004). It is also difficult to believe that harsh penal sentences are deterring crime in the face of recidivism trends. It is estimated that 95% of current inmates will eventually be released, yet in 1994 close to 70% of released inmates were re-arrested within 3 years. All types of criminal recidivisms are up since 1983 (Beck and Shipley 1989 and Langan and Levin, 2002). Finally, the criminal justice system seems unable to adapt to the socio-economic and ethnic diversity of society. While aggregate violent crime has fallen, it has worsened in the worst locations. Residential society is divided economically and racially, these

disparities have similarly widened within inmate populations. For example African Americans comprise 12% of the American population yet 48% of the incarcerated population (Gilliard and Allen, 1997). Crime is a problem, and the criminal justice system has not found an adaptive response nor a theoretical framework from which to begin the hunt for a solution.

The economics of crime is influenced by its empirical surroundings. In the 1970s economists modeled criminal behavior as rational while crime trends rose and society grew dissatisfied with rehabilitation efforts.⁵ Since then, the economic investigations of crime have been focused on explaining empirical anomalies. But “many leading experts and policymakers doubt that economic perspectives on crime have much to offer, see zero value in attempts to model the conditions under which given public policies can cut crime, and disdain efforts to measure (or, heaven forbid, quantify) the social costs and benefits of competing crime policy options (DiIulio, 1996, p. 4).” The role of government as sole provider of criminal justice is taken for granted with little to no attention paid to alternative institutional arrangements.⁶ Neither subtle nor radical innovations take place in criminal justice because social entrepreneurs fail to recognize opportunities for improvement.⁷

5 Coase (1960) and Becker (1968) began the discussion of the economics of crime. They argued that criminals were rational and responded to incentives. Raising the costs of committing crime deters criminals from committing crime. It was first assumed that punishment was the obvious mechanism by which planners had control over the subjective costs of crime. Harsher penalties, longer prison stays and or the threat of capital punishment should result in lower crime rates. When confronted with the empirical anomaly that increased severity of punishment had not effected crime, Becker concluded that criminals were “risk preferring.” Becker's framework has since been updated and is now being re-interpreted to look more closely at how probabilities of criminal success compare to the probabilities of an efficient criminal justice system. See Block and Lind (1975a and 1975b).

6 For example Stigler (1970) argued that: “few crimes of sane men could escape detection. We could make certain that crime does not pay by paying enough to apprehend most criminals (ibid., p. 527).” Landes and Posner (1970) creatively attempted to model the “optimal enforcement of crime,” but they assume:

- (1) All penalties are fines and the costs of collecting them are zero...
- (2) The aggregate enforcement production function yields constant returns to scale.
- (3) The cost of apprehending and convicting offenders is identical under private and public enforcement – that is, technological conditions, enforcement incentives, and factor prices are independent of whether enforcement is public or private (ibid., p. 10).

Discovery of new techniques and cost saving innovations have no place in these equilibrium approaches. In these views solving crime is nothing more than a budget constraint.

7 Lavoie (1985) summarized the problem of national economic planning when he wrote:

[W]hat is wrong with these policy debates is precisely that they do not dare to be utopian enough. that is, they confine their attention to minor modifications in the established and badly rusted out political machinery instead of trying to imagine the substitution of a

Randy Barnett said “[t]he United States today delivers law and order in the same socialist manner that the USSR delivered food and shoes – and with comparable results (Benson, 1998a).” Central planning has no ability to mimic the knowledge creating process of the market. Individuals cannot report their wants and desires to a central planner and expect them to be met. The criminal justice system is provided as if there were no scarcity. By definition, demanders want more, better, easier goods, always and all of the time. Only when they are confronted with scarcity must they buy, sell, optimize, and economize -- all the while making several decentralized decisions that express and reveal their preferences to suppliers. Criminal justice provision requires the process of economic coordination just as much as any other form of social cooperation. When crime takes place there are “justice demanders” -- individuals who want to secure their property, investigate the facts of the crime, bring the criminal to trial, and impose a form of punishment. On the other side of the market are “justice suppliers” -- individuals who offer resources and expertise to provide justice: legislators with enlightened perspectives on the law, judges with innovative case rulings, talented policemen, and skilled correctional officers. Knowledge is problematic on both sides of the “market” for justice. Justice demanders have no forum to express their specific preferences for justice and would-be suppliers of criminal justice are never signaled to the profit potential in supplying quality justice services. This paper asks: how can criminal justice be provided to society while best solving knowledge problems?

Information is a fundamental failure of government-provided criminal justice services.⁸

fundamentally different approach altogether. What is needed is a radical perspective, both in addition to a scientific perspective and as a logical consequence of it. We need to locate the root cause of the social maladies we have endured and stop combating their symptoms (ibid., p. 16)

8 Benson (1998a) downplayed the importance of knowledge in favor of incentive-based explanations when he commented:

The Institute for Local Self Government has dismissed contracting out for full police services as infeasible, because “there are no secret methods, known only to the private sector of running an entire police department” (quoted in Poole 1983, p. 10). But the relevant issue is not knowledge or even desire; the fact is that the incentives of public bureaucrats are very different from those of private producers (Benson 1995) (ibid.,p 26).

Government's informational deficit in the criminal justice context is an unavoidable outcome of their centralized provision. This suggests that law enforcement reforms that leave government as the primary manager of criminal justice are bound to fail in some way. Successful reform requires eliminating the root cause of the information deficit: government itself.

INFORMATION NODE ONE: THE LEGISLATURE

It is not obvious that efficient law enforcement depends upon the creation and definition of laws, but it is true nonetheless. If tomorrow chewing gum was deemed criminal it would be extremely difficult to enforce. If legislators were serious about the prohibition, their attempts at enforcement would be expensive and arduous. Patrol cars would have to stop every block to arrest violators, they would be busy twenty-four hours a day. The courts would clog with gum chewers, and prisons would be overcrowded. The ability of the state to enforce crimes against theft, rape, and murder would weaken. But people would be outraged at the ridiculousness of the prohibition. The people's de facto underlying preferences for justice and the rule of law would be in conflict with the de jure prohibition of chewing gum. This tension would lead to high enforcement costs and or an inevitable institutional change (Boettke et al., 2006). Failing to match the supply of criminal legislation with society's demand can jeopardize the functionality of the entire criminal justice system.

Today's "war on drugs" is a similar concern. "Drug prosecutions have comprised an increasing proportion of the Federal criminal caseload – from 21% of defendants during 1982 to 35% during 2004 (Sedgwick, 2006)." The percentage of prison inmates charged with drug-related crime has similarly risen from 6.4% in 1980 to 20.1% in 2003 (Chaiken, 2000 and Harrison and Beck, 2006). And "[b]y two to one, Americans describe drug abuse as a medical problem that should be handled mainly through counseling and treatment (63%) rather than a serious crime that should be handled mainly by the courts and prison system (31%) (Hart, 2002)." The war on drugs carries significant costs and its

Barnett (1998) in contrast has thoroughly described several types of knowledge problems in the provision of law and order. Both have argued in favor of restitution-based justice because they appear to solve and avoid both knowledge and incentive problems.

repeal arguable benefits (Miron and Zwiebel, 1995), but that is not to say that drug use is acceptable nor legalization preferable. The question for political economists has to be; can the costs and benefits of drug prohibition or drug tolerance be internalized on the individuals who favor those policies rather than distributed across all of society? It is evident that there is a continual tension between the people's demands for justice on the one hand, and the institutionalized supply of justice on the other. The tension is easily observed in the war on drugs, but it is also at play everywhere the actions of suppliers and demanders of justice are interrupted from coordinating. When allowed to buy and sell for the creation of law, the available supply of legislation matches the type and quantity that is demanded by society.

Early in history there was no distinction between civil law (the law between persons) and criminal law (the law between person and state). No central authority said, “this is the law, and someone has broken it.” Instead individuals conflicted with one another saying, “he did something wrong, to me.”⁹ Rules emerged and governed the relationships between individual people before the state defined the criminal law. These laws were predominantly concerned with the enforcement of private property, ownership, and debts.¹⁰ Hence areas with relatively few people and vast landscapes such as North America developed private property and land titling much later compared to European areas with a higher population to land ratio.

The state eventually took over as sole provider of law, order, and policing, and thus the criminal v. civil schism took hold.¹¹ Now civil laws are “private” laws; they operate through the self-serving

9 Many historians concerned with the development of ancient law echo this “private” genesis of legal development. See Maine (1872), Zane (1927), Cohen (2005), and MacDowell (1978). Popisil (1971) considers primitive tribal legal norms as similar to legal norms of ancient societies. Benson (1998a) goes so far as to say “[t]he historical reality of crime policy is that public provision of criminal justice is a recent social experiment that has not worked as predicted. The increasing role of private-security that we see today is actually a return to historical practices rather than something new (ibid., p. 5).”

10 The omnipresent quality of law beyond legislation is referred to as “natural law,” or the “law of nature.” In its reserved form of Thomas Aquinas, the phrase “natural law” refers to the inclined tendencies of a thing, or person. This framework does not inherently imply specific moral or ethical conclusions though much of the natural law tradition has been framed as ethical philosophy (Murphy, 2002).

11 The literature devoted to defining the difference between civic and criminal law repeatedly points out the ambiguity between the two terms in theory and practice. See Kleining (1978), *Boston University Law Review* (1996), and Duff (2000).

efforts of individuals, while criminal laws are totally defined and enforced by the state. The difference between civil and criminal law can be defined with reference to incarceration. For committing a crime a person can be sent to jail; for committing a tort or civil offense a person can be sued or fined. For failing to live up to a civil fine a person can be subjected to criminal consequences. Lastly, criminal law trumps the priority of civil offenses. Jail time must be served even if it inhibits the ability of a criminal to pay restitution to his victims. The absolute authority of supplying both civic and criminal law lies in the hands of the state (Duff, 2004).

At first, criminality was determined by the intention of the defendant. If someone accidentally killed another person in a car crash they could be held liable against civil charges, but to accuse them of murder was inappropriate. If it could be proven that the driver intentionally ran down the victim, the criminal law would be invoked. *Mens rea* or “guilty mind” was a meaningful distinction so long as the law was concerned with person, property, ownership, and damages.¹² But throughout history and today, there are crimes that do not refer to any damaged person or property. Prostitution, drug use, military conscription, taxes, environmental controls, commercial regulations, etc., all carry criminal consequences, yet they are not acts of violence, theft, property damage, or breach of contract. Intent is no longer a meaningful distinction for criminality.¹³

Today the criminal law is defined and produced by centralized, federal, and state governments. The democratic process controls the criminal law. The people vote for candidates. Candidates propose bills, laws, and constitutional amendments. The media communicates between the political and the civilian worlds, and finally the political process starts over again. It is assumed that candidates who do a bad job at implementing the “will of the people” get voted out of office and replaced by better candidates.¹⁴ Democratically provided criminal justice avoids catastrophe, but do the people's

12 On *mens rea* see Hart (1968, pp. 136 – 157).

13 Healy (2004) makes note of the rising amount of criminal offenses in the U. S. and its consequences on personal liberty, business investment, and commercial risk. He claims that many of the new criminalization are unconstitutional and the result of a central-state seeking increased power and control over the private sphere of society.

14 Wittman (1989) is perhaps the biggest defender of efficient democracy. Caplan (2007) perhaps his greatest opponent.

demands for criminal law get met as well as they could?

Several systematic tendencies hinder the effectiveness of the political process to detect and represent the demands of society. Society's demands for criminal justice are diverse. Some people want to take drugs, others want them controlled. Some people support the death penalty while others are against it. On narrowly defined policy issues everyone seems to have an opinion that they can articulate when asked, but on broader practical levels of decision making individuals are woefully ignorant about criminal justice. The average person does not know how the next dollar spent on security devices, police officer salaries, courts, or prison construction will have an effect upon the levels of crime in society. How much, what type, and at what cost? -- these questions never get answered in the political process because they never get asked. Instead it is assumed that the provision of criminal law is a right and the state is responsible for providing it. Why would a political official have more knowledge than any ordinary person about how marginal changes in justice institutions reduce crime? The decision is too complex for a single mind to digest without trial and error, success and failure, profit and loss.¹⁵ Centralized criminal justice never confronts a “hard budget constraint.”¹⁶ The “soft” constraint of the political process relies on voting as a correction mechanism but the process is slow and infrequent. It also relies on competition between candidates and political parties but this is an unvaried pool of opportunity.¹⁷

When surveyed, American opinions about the criminal justice system do not adjust to real

15 When restating Hayek's (1945) description of knowledge in society, Lavoie (1985) wrote:

The truly relevant “data” that a planning organization would need in order to “uncover” a modern economy's “interacting empirical realities,” resides deeply embedded in and dispersed among the separate minds of millions of people. In the relevant sense of the term, the data do not exist. The knowledge relevant for economic decision making exists in a dispersed form that cannot be fully extracted by any single agent in society. But such extraction is precisely what would be required if this knowledge were to be made usable for a single planning agency (ibid., p. 56).

16 Kornai (1986 and 1998) developed the terms “hard” and “soft” budget constraints to explain the shortages and inefficiencies of production in the Soviet Union and other socialist countries. Shortages do not imply that a given good or service is not being produced altogether, but it does signal that demand is exceeding supply and the production function is not updating.

17 Public Choice economists refer to this tendency as the median voter theorem. Where candidates appear to the most

changes in the levels of crime, nor do they respond to changes in government spending on crime. Through periods of significant fluctuations in crime and justice spending, moderate levels of steady approval are reported about law, police, courts, and prisons. When citizens are asked “should more money be spent on criminal justice?” they say yes regardless of crime levels and spending (National Opinion Research Center Surveys for 1973-1993). Survey reports are not the same as revealed preferences. Asking someone what they think is not the same as observing him spend his money or forgo an alternative. Asking if people “support more spending on criminal justice while paying higher taxes” would probably yield a different response (Mueller, 1968). If demanders were put against a hard budget constraint and purchased criminal justice services through a market, different results would follow even more so. If it is true that the allocation of criminal justice services provided today are different from how they would be allocated on the market, then it is obvious that some demands are not being met.

An individual decision maker is ignorant about how the broad structure of criminal justice should be arranged. In this sense individuals on the market would be no different from individual political planners. But a market for criminal law can produce information through market transactions that inform justice providers of the type and quantity of criminal law demanded by society. Theoretically, little attention has been paid to modeling the creation of law as a market.¹⁸ But historically most legal norms rest upon a foundation of self-serving private property rights because these norms served as a coordination device in much the same way that prices coordinate efforts in the market.¹⁹ Property rights were not dictated from a central authority, instead they emerged as a cost

popular common denominator of policy agenda and essentially appear identical in real policy advocacy despite representing ideologically different constituencies. See Black (1948), Downs (1957), and Congleton (2002).

¹⁸ See Benson and Engen (1988), Landes and Posner (1975), Friedman (1984), and Stringham (1998).

¹⁹

Carl Menger (1963) proposed that the origin, formation, and ultimate process of all social institutions (including law) is essentially the same as the spontaneous order Adam Smith (1776) described for markets. Markets coordinate interactions, as does customary law. Both develop as they do because the actions they are intended to coordinate are performed more effectively under one system or process than another. The more effective institutional arrangement replaces the less effective one (Benson, 1990, p 15).

saving device to human interaction, and furthermore served as a critical step towards the establishment of a general law of property that coordinated more interactions amongst diverse individuals. Money, prices, property rights, laws, and criminal sentences are all essentially produced through the dispersed unplanned efforts of several interacting persons over time.

Before centralized criminal justice arose, individuals sought to secure their property by posting signals of ownership like signs and fences,²⁰ that communicated a particular piece of property specifically belonged to them. They told the passer-by, “someone will come looking for this bit of property, so better not use it if you want to avoid conflict and the costs that conflict carries.” Individuals use resources, equipment, livestock, and building materials in order to achieve complicated goals. The degree of complexity that a person's plan can take is limited by the available means at his disposal. A person decreases his costs and expands his potential stream of benefits when he has consistent and reliable use over physical goods in the form of private property rights. When a person goes to rely upon a resource that he had included in his plan, only to find out that someone else has taken it or used it, conflict erupts. Property disputes were the most common form of conflict therefore they had a dominant influence upon the earliest resolution processes and social norms of ownership (Demsetz, 1967). It was within most people's private interests to support dispute resolution strategies that relied on private property norms because they commonly shared the human experience of trying to complete complicated plans.

There are several examples where judges competed in commercial markets to resolve disputes, offer arbitration, and settle violence.²¹ Judges recognized that it was preferable for people to resolve

²⁰ For example, the inventions of barbed wire and branding were big steps in developing property rights to land and cattle in the American frontier. See Ellickson (1991), and Anderson and Hill (2004). More recently computer technologies like firewalls and encryption technologies are marking off private territories on the Internet see Benson (2005) and Coyne and Leeson (2005).

²¹ MacDowell (1978), Maine (1872), and Zane (1927) all believe that the first judges were kings. It was preferred to outsource dispute resolutions and kings with the best reputations were rewarded the highest tribute. Benson (1998b, and 1990, pp. 11 – 42) has described the history of commercial law as a market of competing international arbiters. Stringham (2002 and 2003) believes that conflict resolutions in the first stock exchange were provided by the market. Friedman (1979) describes Ancient Iceland as having a market for legal services as well. And more cases seem to be investigated year after year.

conflict so they could more easily use the goods that were under dispute. Feuding over property was self-defeating.²² The ownership and use of property are economizing processes, whereas conflict is costly and wasteful. The value of the goods in conflict, the delayed usage, and the efforts of conflict are all costs. This net amount provides a signal for entrepreneurship and innovation in dispute resolution. By framing dispute solutions as restitutions (financial payments instead of violent retaliations), judges could appeal to both parties of a dispute. Innovators discovered creative ways to mutually satisfy disputes and justice demanders were motivated to reward them. Profitable strategies were mimicked and losing resolutions continually avoided, thus the institution of private property was self-reaffirming.²³

The market for law criminalized certain types of actions and avoided criminalizing others. When the costs of pressing a case against another person outweighed the potential benefits (discounted by the perceived probability) of winning the case, an individual did not press the charge. It was unlikely for someone to bring a case against another for chewing gum. It would have been difficult for the accuser or the accusee to signal to a judge that a profitable, mutually-agreeable solution could be discovered in a case like this, because there was no amount of disputed property or wealth that the supplier could see and say, "I can charge a fraction of the value of that good, if only I can get those two

22 When surveying historians who have researched and written on the most famous feuds (Friedman 1979, Daniel 1987, Dean 1997, Miller 1990, and Wormald 1980). It seems obvious that the typical perception of feuds as persistent, chaotic, violent, and infectious is overstated if not false. The character of feuds through history is much more close to a process of conflict resolution and rule following behavior than political theory implies.

23

A similar transition from specificity and concreteness to increasing generality and abstractness we also find in the evolution from the rules of custom to law in the modern sense. Compared with the laws of a society that cultivates individual freedom, the rules of conduct of a primitive society are relatively concrete. They not merely limit the range within which the individual can shape his own action but often prescribe specifically how he must proceed to achieve particular results, or what he must do at particular times and places. In them the expression of the factual knowledge that certain effects will be produced by a particular procedure and the demand that this procedure be followed in appropriate conditions are still undifferentiated. To give only one illustration: the rules which the Bantu observes when he moves between the fourteen huts of his village along strictly prescribed lines according to his age, sex, or status greatly restrict his choice. Though he is not obeying another man's will but impersonal custom, having to observe a ritual to reach a certain point restricts his choice of method more than is necessary to secure equal freedom to others (Hayek, 1960, p. 151).

people to stop fighting over it.” It would have been more difficult for judges to signal reliability, predictability, and quality of service, to paying customers when they tried to settle cases like this. What could be the next behavior taken to court? -- anything would go.

Markets in criminal justice can discover and transmit knowledge at the nodal point of legislation because the suppliers of criminal legislation continually respond to the expressed, subjective, diverse, and changing preferences of demanders. Society never reveals its true preferences for law, so law makers lack the knowledge of what the law should be. This gap can be bridged through profit opportunity and self-interest in market-based legal systems. There is reason to believe that the process can continually and systematically diminish the gap by encouraging the discovery of better ways to meet old preferences. Two pieces of evidence support this claim: first is the fact that non-centralized legal systems are capable and do develop into complicated and intricately-specific legal norms. Second, the history of self-serving contract law has born witness to continual evolutions and innovations that make contracting easier, cheaper, and better at preemptively avoiding conflict from ambiguity

In historic examples where there is no central provider for criminal justice, individual cases drive the development of highly specific legal norms. There is no formally imposed, over-arching entity to define intricate legal policies, yet legal policies take on an intricate quality nonetheless. Legal norms evolve that distinguish between many subtle differences of harm. The particular value for unique actions and services within these communities are reflected in how criminal damages against those actions are awarded restitution in court. For example, in Homer's Iliad, Ajax reminds Achilles that even the death of a brother can be atoned for with financial payment. This implies a well known hierarchy of value with brotherhood atop other relationships below, this value scale was mirrored in the criminal code with higher financial penalties for killing someone's brother compared to uncle or other relation – without a formal state authority. Kaminski (2005) described a litany of social norms that he

observed in the extra-legal environments of Polish prison during the mid 1980s. With unique circumstances of scarce space and clean air, even passing gas without alerting one's neighbors carried explicit punishments. In primitive tribes, criminal penalties are ratcheted up at several subtle stages of criminal action (Shafer, 1960). This demonstrates an ability for the private legal order to respond marginally and adaptively to unique cases. It also demonstrates that individual tribesmen recognized the power of incentives and sunk costs. If the victim is going to successfully regain his property then the criminal must be constantly inclined to both halt his criminal behavior and submit to the ruling of the court.

When the state entered the scene and dominated the criminal justice system, much of the decentralized nature of the civic law remained decentralized. Contracts are a preemptive way for individuals to avoid the costs of conflict. They are a way to promote and encourage reliability in a plan that uses goods and uses the efforts of autonomous individuals. By drafting more and more explicit contracts, individuals can accomplish more and more complicated plans because contracts constrain the range of actions that their signers can take. Just as private property emerged as a standard of dispute resolution amongst conflicting agents, standard norms and practices have emerged to guide contract interpretation. Entrepreneurial contract attorneys and judges have discovered creative ways to avoid ambiguities during the contracting process. Things that caused conflict in the past are foreseen as potential problems in the future and contractually avoided. As there are marginal demands for specificity in the creation, definition, and interpretation of the law, the supply and quality of the law responds proportionately.²⁴

24 See Posner (1981, pp. 192 – 203) and Posner (1972) and Calabrisis (1970) explained that tort victims could maximize their expected utility by minimizing their faced uncertainty in the judicial process. Church (1979) has described a similar process in criminal law, when criminals engage in plea bargaining rather than going to trial. Shukaitis (1987) argues that allowing tort victims to sell their claims would help facilitate market incentives and efficient outcomes in the civil process. Most recently Helland and Tabarrok (2006) have empirically shown that tort victories and awards are in lock step with political interests. Lawyers recognize these trends and strategically exploit their profitability. Landes and Posner (1975) wrote “we in fact observe – greater reliance on private enforcement in areas such as tort, contract, property, and commercial law, where p [probability of apprehension and conviction] approaches unity and victim property rights are practicable (ibid., p. 32).”

A market for criminal justice can detect and harness the preferences for the amount and content of law better than a centrally-provided criminal justice system. In the past this has led to restitution norms rather than punitive responses to conflict. Restitution acts as a feedback mechanism inclining victims and citizens to invest in security services. This investment acts as a profit motive to spur innovation and efficiencies that continually coordinate between the suppliers and demanders of law. The repetition of the market acts as an error correcting process that continually meets society's demands for law.

INFORMATION NODE TWO: JUDGES AND COURTS.

Judges also hold influence over the criminal justice system. Imagine if tomorrow all of the judges in America developed a deep hatred for gum chewing -- regardless of the law, they began to rule over their cases so that gum chewing was the worst offense. No gum chewer would win a case, they would be fined high tort penalties, and face criminal sentences. What ever the de jure laws formally stated, the gum haters would have power and influence over the de facto content and enforcement of laws.

To a degree, democracy holds the power of judges in place. Depending upon the state, judges are either elected to office, or they are appointed by elected political representatives. In theory, judges are controlled the same way as legislators. When citizens are unsatisfied, they cast votes, but the same imperfections that plague the process of creating legislation also hold in the political process of selecting judges. Voting cycles are intermittent, and the political opportunity pool is shallow. The provision of judges does not face a hard budget constraint.

The common law directed by the doctrine of *stare decisis* (case law) explains a judge's role as a discoverer rather than a creator of the law. The law is supposed to exist prior to the case ruling, it is up to the judge to recognize and apply it correctly. Judges are trained and educated for this role, but problems occur and persist. Helland and Tabarrok (2006) have pointed out that rulings and the size of

tort-awards are predictable. The socio-demographics of the community, the presence of a judge compared to a jury, and how the judge was appointed, all have systematic effects on the outcomes of a case. These tendencies can be strategically exploited by enterprising lawyers. Similarly, Sobel and Ryan (unpublished) are investigating if judges level stricter criminal penalties, or give more false rulings in months preceding local elections to appear tough on crime.

People's reported confidence in the legal system has waned over the years. In 1973, 24% of those surveyed reported "a great confidence" in the legal system, in 1993 it was down to 8% (Hengstler, 1993). A person's dissatisfaction with the court system is correlated with their race, their level of poverty, their experiences with crime and the criminal justice system (Myers, 1996). These demographic correlations are similar across the separate institutions of criminal justice. Those who dislike the laws, also dislike the courts, the police, and the jails. Individuals have no decision making power to control the bundle of criminal justice services. An individual cannot influence whether investment gets made in a better detective to work a case, or a more intelligent judge to preside over it. The public is never confronted with real constraints to optimize against for the provision of criminal justice. The separate institutions are never held as substitutes against one another or any other type of good or service. This results in general groups, with generally similar experiences, having generally the same attitudes about crime. Media plays a significant role in linking the magnitude of a crime's severity with its political emphasis. Increased spending and growing bureaucracies are ways that political entrepreneurs capitalize on the public's willingness to consent to increased spending.

How do judges make decisions in specific cases? Coase (1960) argued that the specific allocation of awards in a case do not matter so long as transaction costs do not inhibit the flow of resources between the parties involved. Costly precautions against conflict are paid for by those to whom they yield the most value. In reality, transactions costs abound. The political provision of criminal justice is rigid. Individuals are not left free to bargain dispute resolutions in criminal cases.

Legislations mandate that criminal acts be reported to local police. If a victim tried to regain his own lost property, or he tried to investigate a violent crime, or he hired someone to investigate for him, he risks being accused of withholding information from the police, or interfering with police investigations. Once convicted, a criminal must serve a public jail sentence, regardless of his responsibilities to repay financial restitution. These rules and institutions act as transaction costs because they inhibit the free bargaining between criminals and victims to reach resolutions concerning their cases. The incentives for innocent victims to take certain types of criminal precautions are suppressed under the current criminal justice system. Is there a process that could systematically eliminate transaction costs that plague bargaining opportunities in conflict scenarios? Centralization of the legal system effectively freezes a given level of transactions costs into permanent institutions, while markets are ongoing processes that encourage entrepreneurs to strive for cost cutting strategies.²⁵

Current legal theory assumes transactions costs are unavoidable and gives an active role for judges to rule cases so that social economic wealth is maximized (Posner, 2003). Judges act as central-planners who try to re-allocate disputed resources to achieve criminal justice. In a case of theft the judge is asked to determine the guilt of the defendant, the appropriate value of the harm he caused, and a matching criminal sentence. Current retributive sentencing norms allow judges to impose any or all sorts of corrective sentences: restitutions, rehabilitations, or punitive stays in prison. Judges face several knowledge problems to effectively rule over cases. First they do not know what sort of

25 Landes and Poser (1975) footnote the following:

This is not universally true. In England and Western Europe, the victim of a crime is frequently permitted to prosecute if the public prosecutor declines to do so. [See Dickens (1973), Langbein (1974), and Herrmann (1972)]... In several states in this country, private prosecution of crimes is permitted if the public prosecutor consents. The practical significance of these islands of private prosecution may be small, however. Since most criminals are judgment-proof, the incentive of private individuals to prosecute for crime would ordinarily require that a bounty be offered for successful prosecution, and it is not. In the absence of a bounty or a solvent defendant, private enforcement encounters serious free-rider problems. However, some criminal actions are still brought privately in England, for example by department stores against shoplifters, where the benefits to the individual store of establishing a reputation for vigorous enforcement are presumably great (*ibid.*, p. 31).

allocation will best satisfy the victims preferences for justice. Should case outcomes be designed to achieve equality? Should they be designed to maximize net wealth across individuals, or should they be solely concerned with leveling penalties upon criminals? Second, once a standard is selected, judges must discover the particular ruling that can re-allocate resources to achieve that standard. What ruling will actually maximize social wealth, or equality, or whatever? Finally judges need a mechanism to update so that errors get corrected and avoided in the future.

Markets are processes that gain and use relevant information, discover error, promote entrepreneurial innovation, and lead to ever growing rates of social cooperation. “Hayek argues that the proper level of selection [of rules] is at the meta-rule level, which is to say in selection between societies governed by different systems of rules. Individuals can choose and experiment with different individual rules within an ongoing spontaneous order (Zywicki and Sanders, 2008).” Hayek's (1973) vision was exemplified in early legal history when several competing judges with marginally different interpretations of the law ruled over the same geographic locations. Individuals in dispute could bring their cases before different judges, or in some cases to a large tribunal of judges who would offer several resolutions. The conflicting agents would select the ruling they preferred and pay a fee to the judge who drafted it.

The incentives were for judges to draft case rulings that were mutually agreeable to both parties involved in the dispute, and therefore be selected unanimously over the other judges. But if they could not agree, the court would continue updating its proposed solutions until some resolve was reached. Disputants were held in check by the “socialness” of the legal system. While they had choices amongst judges they did not necessarily have unlimited choices about how to respond to crime. Refusing to accept a judge's rule could carry consequences of ostracism or exile. Creative constitutional restraints often emerged to fill exploitable gaps in the legal process. For example, in Ancient Greece prosecutors could only search the alleged aggressor's home while naked so they could not plant falsely stolen

goods.²⁶ Abiding by the court's rule had preferable outcomes compared to personal, self-serving disputes. Specialized judges had no incentive to use physical violence whereas individuals feared losing face in front of family and friends. Submitting to the court was itself a constitutional restraint against violent retaliation that was voluntarily chosen by individuals engaged in conflict.

The standards and techniques of profitable case ruling were witnessed and mimicked by competing judges until a body (or bodies) of general law united the larger pool of judges. To continually compete for profits, judges differentiated themselves by their reputations for age, wisdom, fairness, and consistency in applying rules. Judges had to continually foresee the profitable preferences of what society demanded in criminal case rulings. When there was a significant divergence between the people's attitudes towards the courts on the one hand, and the rulings that were being awarded by the courts on the other hand, then there was an entrepreneurial opportunity for a judge to break with tradition and meet the demands of the people in an innovative way. King Solomon's infamous decision comes to mind.

Would a market driven judicial system be influenced and exploited by wealth and privilege? The same incentives that motivate judges to rule according to commonly accepted standards also inclines judges not to rule in biased favor of wealthy elites. If a judge was biased, then the wealth of his client base and the payments he awarded them would serve as a profit motive for alternative judges and lawyers to service the victims even if they happened to be poor. Competitive markets for lawyer services and judicial rulings help to assure access to justice for poorer citizens against exploitation by wealthier citizens, similar to how loan markets provide financial capital according to the profitability of an idea even for individuals with small amounts of collateral. The better the idea the less amount of collateral needed to secure a loan.²⁷

²⁶ David Friedman brought this to my attention.

²⁷ See Friedman (1981) and Lott (1987). Lott points out that increased spending and quality in legal services does not imply biased judicial rulings, so long as judges are effectively constrained. In fact they can have efficiency gains for criminal justice by deterring frivolous cases. Friedman (1981) argues that equal fines are not necessarily an effective device to deter wealthy criminals. Landes and Posner (1975) demonstrate that profits will maintain an optimal entrance and exit into the field of judicial services, leaving one to conclude that these matters of explicit policy will be

Historically there are several cases where markets developed for judicial services. Judges specialized in the service of providing dispute resolution for a profit. When disputes were prevalent, high profits drove in additional judges. With thick market competition, judges competed with one another by offering high quality service at accessible prices. The perpetual profit motive held judges in check from manipulating their positions of authority to influence the law in ways that would damage social cooperation. Judges were self-motivated to provide rulings that society preferred and individuals were willing to pay for. The provision of judges through markets can perpetually maintain proportionate attention to society's demands for judicial services.

INFORMATION NODE THREE: LAW ENFORCEMENT AND POLICE

Determining when a crime has taken place is one of the most important questions for law enforcement to answer. The current criminal justice system has done well at recognizing the importance of this question, but it has had little success in actually discovering a practical solution. The individuals with the best access to knowledge and information about the frequency and effects of crime are the citizens and victims in the local communities where crime takes place. The first step of law enforcement is to tap into communities to find out where crime takes place, who is responsible, and how they can be found? Conventional wisdom says that large amounts of crime go unreported and undetected.

Recently, police departments have tried to tap local knowledge by training officers in “community policing.” Officers are instructed on how to interact with local populations, build relationships, and get leads on crime. The goal of community policing is to increase the recognition of the police force as a part of the community. Reports show that contact with the police has a significant influence on improving people's opinions about the quality and effectiveness of police, but it seems that the general public has yet to develop a nuanced perspective on the specific tactics of formal “community policing” (Huang and Vaughn, 1996, p. 42). Society's general opinion of the police is

determined by a judge's dominant presence within the market.

static at a reasonably high approval rating. When viewing this static trend along with wide varieties of opinion across demographic groups, and crime rate changes over time, the empirics seem puzzling. People's opinions about the police do not update when police are doing things differently. People's beliefs about the police do not update as police succeed and fail at solving crime.

Community policing programs seem like steps towards solving the knowledge problems of crime detection but they leave broader questions concerning the institutional arrangement of centrally provided law, police, and correction services up for debate. There is no theoretical framework from which to determine whether the discovery and adoption of these techniques was slow, quick, or ideally-paced. Could law enforcement agencies be inclined to discover better techniques at a faster pace? Could law enforcement agencies be more assured that the techniques they employ meet the underlying preferences for justice that are held in the minds of the citizenry? Benson (1998a, pp. 29 -33) argues that private rather than public security firms have more incentives through financial profit motives to discover and innovate useful strategies to deter and respond to crime and recent trends support his claim. In fact many of the specific techniques now being called “community policing” were innovated by private firms who faced stronger incentives to innovate and save on costs.

The under-reporting of crime stems from knowledge problems created in the earlier information nodes. When the formal definitions of laws do not match people's real preferences for justice, crimes that fall outside of those preferences are likely to go unreported. Community members and victimized citizens will report criminal behavior when the perceived benefits outweigh the costs. Individuals will report crimes that are within their interests to report.²⁸ Crimes directly against one's person and property are more likely to be reported and signaled to police compared to non-proprietary or imposed social policy violations, but non-victimized, unreported, or even successfully deterred crimes, are basically uncountable.

²⁸ People are more fearful of property crimes compared to violent crimes considering they take place with far greater frequency, but the magnitude of the difference in belief is significantly smaller (Haghighi and Sorensen, 1996, pp. 22 - 23).

There is a persistent gap between the number of people who reported being victimized by violent and property crimes compared to the number of crimes that were reported to the police. For crimes with clearly identifiable victims (aggravated assault, burglary, and robbery) New York, Chicago, and LA, all had steady estimates of unreported crime around 50% (Lauritsen and Schaum, 2005). This leads one to conclude that the unreported to reported ratio of victim-less crimes like prostitution, drug sales, drug use, etc. are unreported at higher rates. One would also assume that the current estimates of these activities that are based solely on police's awareness of these phenomena are *vastly* under-represented.

In his ethnographic investigation of the urban underground, Venkatesh (2006) found school principals and church leaders who would rather protect drug dealers in their community than report them to police because the community was so dependent on the financial rewards of the drug trade. For police to detect crime, reporting crime must be valued higher than its costs. Reporting can be very expensive. First, victims face costs in the actual time and effort it takes to go to the police, file reports, maintain communication, and testify in criminal trials. Second, the victim might perceive reporting crime to be dangerous. What if the criminal finds out he was reported and wants to silence the victim, what if the nature of the crime makes it obvious who reported him?²⁹

The perceived benefits of reporting crime can also be low. Becker (1968) explained that rational criminal action implied that criminals would opt away from committing crime in the face of high costs and harsh punishments. Block and Lind (1975a and 1975b), Posner (1981), Beccaria (1764), Benson (1998a), and others have pointed out that higher costs must actually be recognized by the criminal to carry significant effect. Changes in the probability of punishment have a greater effect on the perceived costs of crime than changes in the harshness of the penalty. An increase in the harshness of a punishment is not matched with a proportional decrease in crime. The perceived costs of a harsh

²⁹ "Concern for their own safety or that of others appears to be the most frequently cited reason given by grand jury witnesses for refusing to testify." Beres (1995) surveys the relevant case literature and reports the cited testimonial reasons broken up by fear for one's self, one's family, etc.

punishment get discounted by a low probability of punishment in the mind of the criminal. When confronted with potentially high financial rewards of crime, and small chances of being discovered, arrested, found guilty, and not winning appeals, even the longest prison sentence or the most extreme penalty can seem insignificant compared to a big criminal score. Decisions that govern over the provision of law enforcement (public or private) must optimize both the payoffs for crime and the probabilities of criminal success simultaneously and in accordance with institutions at the other informational nodes of criminal justice.

The degree that criminal legislation and the rulings of judges match with the demands of society influences the techniques used by law enforcement. When entrepreneurs confront an inability to effect the probability of punishment they opt away from increasing the degree of current punishment techniques (for example a longer prison sentence), instead they experiment with harshness in innovative ways. Hamowy's (1977) history of sexual deviance laws in colonial America reports that traditional punishment techniques such as prison, public ostracism, and forced labor, were ineffective at changing strong preferences for homosexuality, masturbation, or extra-marital sex. Law enforcement changed their tactics to torturous punishments for sexual crimes. Another example is prison gangs. Today, gangs are pervasive throughout correctional institutions, and law enforcement has had little success deterring or controlling them. Now wardens are experimenting with solitary housing units (SHUs), as a penalty for gang involvement. When thought to be gang members, inmates are held in complete isolation from all human contact potentially for the duration of their sentences – years and years and years (Tachiki, 1995).

The probabilities of the criminal justice system working effectively influence the behaviors of rational calculating citizens similarly to how they influence the behaviors of rational and calculating criminals. When citizens decide to buy security goods, or they decide to report crimes, the probabilities of the criminal justice system are a stronger influence than are changes in the degree of

penalties, especially when those penalties imposed upon the criminal are the only form of solace offered to the victim. The types of security products that get invested in are influenced similarly to how the techniques of punishment used by the state are influenced. The state uses more physically invasive punishment techniques when they lack the ability to change the cost benefit calculation of rational criminals. Citizens use weapons as security when they are unable to affect the perceived benefits of crime.

If a victim perceives that the probability of a criminal being prosecuted is very low then he is not likely to report a crime to the police. According to the bureau of justice statistics, “an estimated 56,146 felony cases were filed in the State courts of the Nation's 75 largest counties during May 2002... Fifty-seven percent of all defendants were convicted of a felony and 11% were convicted of a misdemeanor (these were not necessarily different cases).” Different types of cases had different conviction rates: murder (80%), driving related offenses (73%), car theft (68%), drug trafficking (64%), and assault (41%) (Criminal Case Processing Statistics). Next, if the citizen thinks that the probability of the criminal being detected or apprehended by the police is low then he is not likely to report the crime. For example, Klaus (2004) reports that in 2002 the National Victimization survey results showed 3,520,360 households, or 3.2% of the population reported being victimized by violent crime, and 13,778,470 households or 12.5% of the population reported being the victim of property crime. According to the *Sourcebook of Criminal Justice* (p. 344), for that same year there were 1,613,954 arrests for property crime and 620,510 arrests for violent crime. About 12% of property crimes induced arrests, and about 18% of violent crimes induced arrests. While some of these criminal individuals could be committing several acts of crime, it still appears that the amount of criminal arrests is relatively small compared to the number of criminal incidents. Similarly the chances of a conviction appear to be about fifty-fifty. These probabilities are viewed simultaneously. Assume the victim gets utility X from seeing his aggressor prosecuted and punished. The expected value of X is going to be

discounted by about half for the probability of conviction (depending on the type of crime) and again by about 1/8th for the likelihood of arrest. The victim's expected value of X is 1/16th of X itself. Does it matter that the police know who stole your car, if they can not catch him, or if the prosecutor can not build a solid case?

Does it matter if they even know your car was stolen, if the guy is going to get away with it anyway? It matters for your willingness to report the crime if your likely to get your car back. It is an over assumption to think that punishments and prosecutions actually serve to give utility to victims of crime. Of course some people gain utility from knowing that criminals “got what they deserved,” but it seems that a criminal justice system that returned stolen cars without punishment would be rationally preferred to a criminal justice system that punished criminals without returning stolen cars.³⁰ Putting aside preferences for one criminal justice system over another, it seems obvious that more crimes would be reported, when the victims of crime had real incentives to report crime. When criminals are deterred both by the degree and probability of punishment, when victims perceive a high reward in the degree of restitution and they expect to receive it with a high probability then they are most likely to report crime.

Restitution norms emerge from decentralized markets in criminal justice, they also solve the knowledge problem of crime detection in two better ways compared to current law enforcement. First, by allowing and promoting the spontaneous emergence of restitution norms, a market driven legal system can assure that victims are at least motivated through money and property to report crime. Second, market competition in security devices, police detection, and correctional services are more likely to have effects upon the probabilities of detection, capture, incarceration, and deterrence than their centralized counterparts because they are constantly inspired by profit opportunities. By influencing victim's and witnesses to report crime and participate in the criminal justice process,

³⁰ The pervasive oversight of victim's losses has inspired several authors in the modern restitution literature. See Barnett and Hagel (1977), Benson (1986), and Shafer (1960).

people's dispersed and contextual awareness of crime is exposed. By buying and selling security, police, and prison services, crime is responded to in the most effective proportions and techniques available, all the while leaving opportunity and encouragement for new technologies, cost-saving techniques, and better methods to be discovered and taken to market. A neighborhood with a lot of crime is essentially a neighborhood with a lot of profit to be made by offering security and law enforcement service. The physical and human capital of law enforcement will flow to where they are needed the most when guided by prices, profits, and losses.

INFORMATION NODE FOUR: HOW TO PUNISH?

Benson (2003) recently posed the question “[d]o we want prisons to be more efficient?” Knowledge problems still exist in prison management despite the recent trend of governments contracting-out prison construction and management to private companies. Streamlining the process of incarceration by offering more prison space at a lower cost may be a technological efficiency gain but its character as an economic efficiency is uncertain. Hart et al. (1997) similarly point out that the incentives arranged from contracting-out lead to quality degrading. Whose preferences does the efficiency represent? With more and more areas of traditional private behaviors becoming criminalized in joint step with rising efficiencies of incarceration, the situation is worrisome. It seems that the easier incarceration is for the state to provide, the easier it is for the state to encroach upon individual liberty.

This may seem like a normative issue of liberty rather than a Hayekian knowledge problem, but it is evidence that the state administration of justice suffers from the same inherent problems as would a system of private providers. Barnett (1986, p. 40) mentions that the major argument against private provision of justice is not that it would well represent the interests of private individuals, the problem is that it would do so too well. It is argued that vengeances and retaliations would be too high. How can the people's diverse and often conflicting preferences for justice be recognized, tapped, transmitted into action, and restrained all at the same time? This question is no different from the central question of

political economy, how can the state protect and secure property but be constrained from aggressing against the very things it is endowed to protect?³¹ How can criminal sentences remain proportionate? In historical cases of market driven criminal justice, restitution norms were emergent, and self-reinforcing. Restitution norms arrange the incentives of participants in the criminal justice system to act defensively rather than aggressively. Without a monopoly privilege over legal institutions, individuals are promoted to avoid the possibility of aggression and opt for prudence of force when possible.

In the current criminal justice system, punishment for punishment's sake is expected to drive the incentives of civilian participants of criminal justice. One could argue that people have the choice to press criminal charges or take an aggressor to civil court, but in reality the civil option for criminal cases still leaves the victim's interests unreported and unrecognized. The current criminal justice process is akin to the following. If someone breaks into your home, takes all of your worldly possessions, you may have a small chance of regaining portions of your property, but little to no hope of regaining it or recouping your incurred losses. If you press additional civil charges upon the criminal it holds less priority than his criminal prison sentence imposed by the state. If the criminal is released and still owes civic damages to you, you may be able to garnish his wages, but this inclines him to work and earn less. In reality, jail sentences have a negative effect upon an ex cons profitability

31 Buchanan (1975) asked how do we get the benefits of protective governance without succumbing to the costs of state redistribution. In the *Federalist Papers* Madison wrote:

[T]he great security against a gradual concentration of the several powers in the same department, consists in giving to those who administer each department the necessary constitutional means and personal motives to resist encroachments of the others. The provision for defence must be made to counteract ambition. the interest of the man must be connected with the constitutional rights of the place. It may be a reflection on human nature, that such devices should be necessary to control the abuses of government. But what is government itself, but the greatest of all reflections on human nature? If men were angels, no government itself be necessary. If angels were to govern men, neither external nor internal controls on government would be necessary. In framing a government which is to be administered by men over men, the great difficulty lies in this: you must first enable the government to control the governed; and in the next place oblige it to control itself. A dependence on the people is, no doubt, the primary control on the government; but experience has taught mankind the necessity of auxiliary precautions (1788, p. 262).

in the outside world (because it's harder to get and keep a job as an ex con for obvious reasons) (Ormerod, 2005). Civic claimants rarely get their due from sentenced criminals. There are no institutions that incline criminals to work and earn wealth nor any institutions that facilitate the payment of earned-criminal wealth to victims.

The current criminal justice process functions only so far as the victim gets a real sense of satisfaction from knowing that a criminal's liberties have been revoked. The techniques of punishment that develop when this perspective is embraced can cause worry. Current American attitudes are ambivalent towards the types of penalties that get imposed upon criminals with subtle distinctions made concerning the age of offender and the nature of the crime (Gerber and Engelhardt-Greer, 1996 and Flanagan, 1996). There may always be those who value knowing that criminals suffer, but current institutions induce citizens to find solace in the suffering of criminals without offering an alternative where they have the opportunity to value the real rewards of restitution.

Historically, punitive sentences were rare compared to restitution norms when demanders of criminal justice influenced its shape by offering real rewards in the face of real constraints. The types of punishments that develop in a decentralized criminal justice system are usually returns of lost property, transfers of existing wealth, and debt-based servitude to be paid to the victim. First in history, violent beatings, rapes, and murders invoked “blood prices” or violent retaliations from the victim. These retaliations became accepted by the local community similar to how private property rights emerged as a social norm. From the criminal's perspective he was fairly certain that there would be a retaliation against him for his act of aggression, he even had a good idea as to how much and of what kind the retaliation was going to come to him.

This led to intricate bargaining strategies.³² If the standard punishment against killing was to be killed, then a criminal was rationally inclined to make a bargain by offering any amount that he

³² Historian, Maine (1872) wrote on the rationality of accepting restitution in ancient law. Also feud historians such as Daniel (1997), Miller (1990) and Wormald (1980) have noted this as well. Economist, Leeson (unpublished a and b) is interested in describing the similar social phenomenon of honor amongst thieves. Conflict in these “stateless” scenarios is not chaotic nor out of control but rather formalized and constrained.

valued less than his life. The criminal hoped that the victim would value the offer more than he valued watching the criminal die. For most people vengeance did not translate into utility. Victims could not make tangible profits by killing or torturing a criminal. At earlier times in history, the death of a family member meant one less unit of labor and that much less productive output for the family. When large sums of money were offered to avoid a blood price, victims took the money. Restitution eventually replaced blood prices as the punishment norm. Just as blood prices were not infinite (a victim could not lay waste to a criminal's entire family) neither were restitution payments once they became the social norm. There emerged standard “market prices” for various types of personal aggressions.

Restitution was a self re-enforcing norm because it was rationally preferred by both plaintiffs and defendants. Violent interaction was creatively deterred, restrained, and halted, by converting penalties into financial sums of money. This money was an obvious profit opportunity for skilled and talented arbiters. The incentives that are promoted in a market-driven, legal system can produce innovations that have real and significant effects upon the probabilities of crime deterrence, detection, capture, and repayment. Poole (1983) reported the Institute for Local Self Government arguing that “there are no secret methods, known only to the private sector.” Benson (1998a) was correct to respond that even if the information is the same between the public and private sphere's, the public sphere still lacks the incentives to act upon that information, but the original claim is also wrong from the start. Not only does the criminal justice system fail to optimize individual information nodes (such as in the creation of legislation where people have no arena to express their subjective preferences for how much money should be spent enforcing drug crimes compared to property crimes), there are also no market prices from which to optimize across the different information nodes. The state cannot determine whether more police on the streets, more convictions in the courts, or more prison cells are going to lower crime the most at the least cost. As a result, the techniques of these fields have been

static for long periods of history. As an alternative, the market would rely upon separate individuals making locally informed decisions at each stage of criminal justice provision. Legislators would draft laws that they perceived to be most demanded, judges would rule cases as their customers demanded, officers would dispatch their services to paying customers, and corrections would be a process of restoring losses, with incarceration as a likely last resort.

Harsh and probable penalties can and do deter crime, but it is important to notice that the subsidized provision of harsh penalties inhibits entrepreneurial discovery and innovation in alternative non-punitive enforcement techniques. For example there are two ways to secure ownership and possession over a piece of property, one could invest in the best available locking device (a high-tech security alarm system), or he can hire the best detective money can buy (Sherlock Holmes). In reality he's likely to choose some optimal bundle between the two -- a decent lock and a decent detective, the most expensive of both would be overkill. But if the salary for Holmes is subsidized, the techniques he uses become stagnant, and adaptive criminals learn to exploit his predictability. Holmes' skill sets and techniques remain the same because he has no competitive influence, even worse, his real effect on the probability of catching criminals and his deterrent effect on crime atrophy. With little hope in Holmes' ability the market for security systems would boom. These types of investments are nearly impossible to measure, even a cab ride instead of walking can be considered a security precaution (Rizzo, 1979).

There is a predictability to the types of security devices that get bought. If a victim recognizes a high probability that a criminal will be prosecuted, but still discounts the probability that he will regain his lost property, or the costs of trial, then the victim is less likely to invest in products and devices that track the identity of criminals and identify his specific property. Instead, the consumer of security services wants to signal that it is difficult to take his property, if the crime does take place he has already lost. Video cameras that record the identity of criminals, serial product codes that identify the

ownership of specific items, and other security devices that when triggered tie the identity of the criminal to the crime, all take second seat compared to security precautions that are predominantly signaling: signs that say beware of dog when no dog is around, video cameras without recording tapes, signs for security alarms but without actual alarms. These cheaper alternatives are rational, cost-saving responses when hopes of restitution are but a pipe dream.

Perhaps gun ownership as a crime deterrent is the preemptive side of the enforcement-technique coin along with harsh punishment techniques. When security purchasers feel hopeless of a real chance at regaining their losses through the criminal justice system, they turn to techniques that give them feelings of empowerment and control.³³ A citizen who tries to optimize his utility of being safe and secure in person and property, treats violent enforcement techniques like owning a gun as substitutes for security devices that make crime logistically more difficult and catching thieves easier. The central question for economists is, what effects the costs of these two alternative methods? Centralization and state-provision in criminal justice services effects the way individuals in society allocate their investments between the techniques to provide security and justice for themselves. Just as a criminal justice system that returns stolen cars is more likely to induce crime reporting from car-theft victims, the techniques of crime response are similarly influenced. Imagine a market for detectives where Sherlock Holmes faces competition from Dog the Bounty Hunter. Holmes uses cunning insight and deductive reasoning to catch criminals and bring them to justice, while Dog's comparative advantage is in brute force and intimidation. Dog is more profitable when judges, courts, and prisons lack a systematic method to return lost property to victims or induce criminals to pay restitution. The opposite is true for Holmes's profitability. Public complacency concerning police brutality could be explained here.

³³ Lott (1998) is perhaps the most vocal and scientific opponent of gun control laws. Simply put his insight is that more guns raise the costs of crime to rational criminals who avoid areas with high rates of gun ownership in favor of areas with lots of gun regulations. Lott's work brings data behind the proverbial wisdom that when guns are illegal only criminals will have them. He believes that gun ownership is the most revealing indicator of crime rate disparity and crime rate changes over time.

CONCLUSIONS:

I described two margins of defining a criminal justice system (1) the structure of its provision: centrally-state provided or decentralized and market provided, and (2) restitution-based, or retribution-based. There is good reason for why these margins are often superimposed so that restitution and market-based are synonymous with one another on the one hand, and state provided and retribution are synonymous on the other. It is certainly possible that a market-based criminal justice system could be punitive and embrace retribution, or a state could design its criminal justice system to provide restitution, but it is not likely for these to be the case. This paper attempted to outline the critical nodes of decision making where useful knowledge of crime and deterrence can be detected and transformed into influential action. At each stage a centralized planner runs the risk of and often succumbs to inhibiting and destroying this precious information. A central planner in any of the nodes can inhibit the remaining nodes from functioning effectively. Don Lavoie (1985) once asked what was left of planning? What are conscious efforts to correct systematic imperfections of industry, society, and politics but planning, planning, planning? What is punishment but another form of planning?

Hayek's knowledge problem exposed the difficulty of coordination in social decision making. It is a challenge of social coordination to link the availability and willingness of suppliers with the preferences and needs of demanders. Markets achieve this knowledge creation and its subsequent coordination in ways that central authorities cannot. When states centralize the provision of criminal justice like any other provision in society, the process loses the capacity to rely upon the full scope of knowledge that represents the underlying preferences for justice that people hold.

State-controlled criminal justice is not immune to the challenges of knowledge problems. Legislation, court rulings, law enforcement, and corrections, like any other form of decision making, require coordinated human behavior, they require information that directs activities so that those needs are economically satisfied. Finally, criminal justice systems require feedback about the effectiveness of

their decisions. Markets create this information and the incentives to act upon it and continually update. By centralizing the role of decision making, governments cannot do any of the above as well as markets. This holds a radical implication for criminal justice policy. Rather than increasing funding and research within the current institutional arrangement to force momentary reductions in crime at increased costs, government must be removed from the monolithic position as sole provider of law and order.

An inability to overcome the knowledge problem is a root cause to government failure in producing effective criminal justice that continually satisfies individual preferences. Where the majority of attacks on government controlled law and order have emphasized a lack of incentives for government to behave itself, this approach argues that even if criminal justice offices were filled with the most benevolent of rulers they would still be inept to provide effective criminal justice.

REFERENCES

- Anderson, Terry and P. J. Hill (2004). *The Not so Wild, Wild West: Property Rights on the Frontier*. Stanford, CA: Stanford University Press.
- Barnett, Randy E. (1986). "Pursuing Justice in a Free Society: Part Two – Crime Prevention and the Legal Order," *Criminal Justice Ethics*. pp. 30 -52.
- Barnett, Randy E. (1998). *The Structure of Liberty, Justice and the Rule of Law*. New York, NY: Oxford University Press.
- Barnett, Randy E. and John Hagel III (1977). "Introduction," in Barnett and Hagel (editors) *Assessing the Criminal: Restitution, Retribution, and the Legal Process*. Cambridge, MA: Ballinger Publishing Company.
- Beccaria, Cesare Bonesana (1764 [1819]). *Of Crimes and Punishments*. E. D. Ingraham (translator). Philadelphia, PA: Nicklin printer.
- Beck, Allen J. Shipley, and Bernard E. (1989). "Recidivism of Prisoners Released in 1983," *Bureau of Justice Statistics: Special Report*. Washington, DC: U.S Department of Justice.
- Becker, Gary (1968). "Crime and Punishment: An Economic Approach," *The Journal of Political Economy*. Vol. 76, No. 2. pp. 169 – 217.
- Benson, Bruce (1986). "Comment: The lost Victim and Other Failures of the Public Law Experiment," *Harvard Journal of Law and Policy*. Vol. 9. pp. 399 – 427.
- Benson, Bruce (1990). *The Enterprise of Law: Justice Without the State*. San Francisco: Pacific Research Institute for Public Policy.
- Benson, Bruce (1995). "Understanding Bureaucratic Behavior: Implications from the Public Choice Literature," *Journal of Public Finance and Public Choice*. Vol. 8, pp. 89 – 117.
- Benson, Bruce (1998a). *To Serve and Protect, Privatization and Community in Criminal Justice*. New York, NY: New York University Press.
- Benson, Bruce (1998b). "Law Merchant," in P. Newman (editor) *The New Palgrave Dictionary of Economics and the Law*. London: Macmillan Press.
- Benson, Bruce (2003). "Do We Want the Production of Prisons to be More 'Efficient'?" in A. Tabarrok (editor) *Changing of the Guard, Private Prisons and the Control of Crime*. Oakland, CA: The Independent Institute.
- Benson, Bruce (2005). "The Spontaneous Evolution of Cyber Law: Norms, Property Rights, contracts, Dispute Resolution and Enforcement without the State," *Journal of Law Economics & Policy*. Vol. 1 No. 2 pp. 269 – 348.
- Benson, Bruce and Engen, Eric (1988). "The Market for Laws: An Economic Analysis of Legislation,"

Southern Economic Journal. Vol. 54. pp. 732 – 745.

Bentham, Jeremy (1995 [1787]). *Panopticon or The Inspection-House: Containing the idea of a new principle of construction applicable to any sort of establishment, in which persons of any description are to be kept under inspection; and in particular to penitentiary-houses, prisons, houses of industry, work-houses, poor-houses, lazarettos, manufactories, hospitals, mad-houses and schools: with a plan of management adapted to the principle: in a series of letters.* available at: <http://www.cartome.org>.

Beres, Linda S (1995). “Games Civil Contemnors Play,” *Harvard Journal of Law and Public Policy*. Vol. 18 p. 795.

Black, Duncan (1948). “On the Rationale of Group-Decision-making,” *Journal of Political Economy*. Vol. 56, pp. 23 – 34.

Block, Michael and Lind, Robert (1975a). “An Economic Analysis of Crimes Punishable by Imprisonment,” *The Journal of Legal Studies*. Vol. 4, No. 2 pp. 479 – 492.

Block, Michael and Lind, Robert (1975b). “Crime and Punishment Reconsidered,” *The Journal of Legal Studies*. Vol.4, No. 1. pp. 241 – 247.

Boettke, Peter J., C.J. Coyne and P.T. Leeson (2006). “Converting Social Conflict: Focal Points and the Evolution of Social Cooperation,” *The Review of Austrian Economics*. Vol. 19, No. 2-3. pp. 137 – 147.

Boston University Law Review (1996). “Symposium: The Intersection of Tort and Criminal Law,” Vol 76. pp. 1 – 373.

Buchanan, James (1975). *The Limits of Liberty: Between Anarchy and Leviathan*. Indianapolis, IN: Liberty Fund.

Bureau of Justice Statistics (2007). “Direct Expenditures by Level of Government, 1982 – 2005,” *Justice Expenditures and Employment Extracts Series*. Washington, DC: U.S. Department of Justice.

Calabresi, Guido (1961). “Some Thoughts on Risk Distribution and the Law of Tors,” *Yale Law Journal*. Vol. 70.

Caplan, Bryan (2007) *The Myth of the Rational Voter, Why Democracies Choose Bad Policies*. Princeton, NJ: Princeton University Press.

Chaiken, Jan M. (2000). “Correctional Populations in the United States,” *Bureau of Justice Statistics*. Washington, DC: U.S. Department of Justice. Available at: <http://www.ojp.usdoj.gov/bjs>.

Church, Thomas W. (1979). “In Defense of 'Bargain Justice,'” *Law & Society Review*. Vol. 13, No. 2. pp. 509 – 525.

Coase, Ronald (1960). “The Problems of Social Cost,” *The Journal of Law and Economics*. Vol. 2. pp. 1 – 4.

Cohen, David (2005). “Introduction,” in *The Cambridge Companion to Ancient Greek Law* M. Gagarin

and D. Cohen (editors). New York, NY: Cambridge University Press. pp. 1 – 28.

Congleton, Roger (2002). “The Median Voter Model,” in C. K. Rowley and F. Schneider (editors). *The Encyclopedia of Public Choice*. Kluwer Academic Press.

Coyne, Christopher J. and Peter T. Leeson (2005). “Who's to Protect Cyberspace?” *Journal of Law, Economics & Policy*. Vol. 1, No. 2. pp. 473 – 510.

Criminal Case Processing Statistics (2006). “Summary Findings,” *Bureau of Justice Statistics*. Available at: <http://www.ojp.usdoj.gov>.

Daniel, Michell (1987). “From Blood Feud to Jury System; the Metamorphosis of Cherokee Law from 1750 to 1840,” *American Indian Quarterly*. pp. 97 – 125.

Dean, Trevor (1997). “Marriage and Mutilation: Vendetta in Late Medieval Italy,” *Past and Present*. pp. 3 – 36.

Demsetz, Harold (1967). “Towards a Theory of Property Rights,” *The American Economic Review*. Vol. 57, No. 2. pp. 347 – 359.

Dickens, Bernard M. (1973). “Control of Prosecutions in the United Kingdom,” *International & Comparative Legal Quarterly*. No. 1. pp. 1 – 34.

DiIulio, John J. (1996). “Help Wanted: Economists, Crime and Public Policy,” *The Journal of Economic Perspectives*. Vol. 10, No. 1. pp. 3 – 24.

Donohue, John J. and Levitt, Steven D. (2001). “The Impact of Legalized Abortion on Crime,” *The Quarterly Journal of Economics*. Vol. CXVI, No. 2. pp. 379 – 420.

Downs, Anthony (1957). *An Economic Theory of Democracy*. New York, NY: Harper Collins.

Duff, Antony (2002). “Theories of Criminal Law,” *Stanford Encyclopedia of Philosophy*. Available at: <http://plato.stanford.edu>.

Duff, Antony (2004). “Legal Punishment,” *Stanford Encyclopedia of Philosophy*. Available at: <http://plato.stanford.edu>.

Ellickson, Robert (1991). *Order Without Law: How Neighbors Settle Disputes*. Cambridge, MA: Harvard University Press.

Friedman, David (1973). *The Machinery of Freedom, Guide to a Radical Capitalism*. Chicago, IL: Open Court.

Friedman, David D. (1979). “Private Creation and Enforcement of Law: A Historical Case,” *Journal of Legal Studies*. pp. 399 – 415.

Friedman, David D. (1981). “Reflections on Optimal Punishment Or: Should the Rich Pay Higher Fines?” in R. O. Zerbe (editor) *Research in Law and Economics*, Vol. 3. Greenwich, CT: JAI.

- Friedman, David D. (1984). "Reflections on Optimal Punishment, or: Should the Rich Pay Higher Fines?" *Research in Law and Economics*. Vol. 3, pp. 185 – 205.
- Friedman, David D. (2000). *Law's Order: What Economics Has to do with Law and Why It Matters*. Princeton, NJ: Princeton University Press.
- Gilliard, Darrell and Allen, Beck (1997). "Prevalence of Imprisonment in the US Population," *Bureau of Justice Statistics*. Washington, DC: US Department of Justice.
- Haghighi, Bahram and J. Sorensen (1996). "America's Fear of Crime," in Flanagan and Longmire (editors) *Americans View Crime and Justice, a National Public Opinion Survey*. Thousand Oaks, London: SAGE Publications.
- Hamowy, Ronald (1977). "Preventive Medicine and the Criminalization of Sexual Immorality in Nineteenth Century America," in Barnett and Hagel (editors) *Assessing the Criminal: Restitution, Retribution, and the Legal Process*. Cambridge, MA: Ballinger Publishing Company.
- Harrison, Paige M., A. J. Beck (2006). "Prisoners in 2005," *Bureau of Justice Statistics Bulletin*. Washington, DC: U.S. Department of Justice. Available at: <http://www.ojp.usdoj.gov/bjs>
- Hart, O. Schleifer, A., and Vishny, R.W. (1997). "The Proper Scope of Government: Theory and an Application to Prisons," *Quarterly Journal of Economics*. Vol. 451. pp. 1127 – 1162.
- Hart, H. L. A. (1969). *Punishment and Responsibility, Essays in the Philosophy of Law*. New York, NY: Oxford University Press.
- Hart, Peter D. Research Associates, Inc. (2003). "Summary of Findings," *Changing Public Attitudes toward the Criminal Justice System*. New York, NY: The Open Society Institute.
- Hayek, F. A. (1945). "The Use of Knowledge in Society," *American Economic Review*. Vol. 35, No. 4: pp. 519 – 530.
- Hayek, F. A. (1973). *Law Legislation and Liberty Vol. 1: Rules and Order*. Chicago, IL: University of Chicago Press.
- Healy, Gene (2004). *Go Directly to Jail: The Criminalization of Almost Everything*. Washington, DC: The Cato Institute.
- Helland, Eric and A. Tabarrok (2006). *Judge and Jury, American Tort Law on Trial* Oakland, CA: The Independent Institute.
- Hengstler, G. A (1993). "The Public Perception of Lawyers: ABA poll." *ABA Journal*. Vol. 97 pp. 60 - 65.
- Hermann, Joachim (1974). "The Rule of Compulsory Prosecution and the Scope of Prosecutorial Discretion in Germany," *University of Chicago Law Review*. Vol. 41, No. 3. pp. 468 – 505.

- Higgs, Robert (2004). "Lock 'Em Up!" *Against Leviathan: Government Power and a Free Society*. Oakland, CA: The Independent Institute.
- Hirsch, Andrew von (1992). "Proportionality in the Philosophy of Punishment," *Crime and Justice*. Vol. 16, pp. 55 – 98.
- Huang, W. S. Wilson and M. S. Vaughn (1996). "Support and Confidence, Public Attitudes Toward the Police," in T. J. Flanagan and D. R. Longmire (editors) *Americans View Crime and Justice: A National Public Opinion Survey*. Thousand Oaks, CA: SAGE Publications.
- Kaminski, Marek M. (2004). *Games Prisoners Play: The Tragicomic Worlds of Polish Prison*. Princeton, NJ: Princeton University Press.
- Kirzner, Israel M. (1978). *Competition and Entrepreneurship*. Chicago, IL: The University of Chicago Press.
- Kirzner, Israel M. (1996). *The Meaning of Market Process: Essays in the Development of Modern Austrian Economics (Foundations of the Market Economy)*. New York, NY: Routledge.
- Klaus, Patsy A. (2004). "Crime and the Nation's Households, 2002," *Bureau of Justice Statistics Bulletin*. U.S. Department of Justice Washington, D.C.
- Kleining, J. (1978). "Crime and the Concept of Harm," *American Philosophical Quarterly*. Vol. 27, pp. 32 – 42.
- Kornai, Janos (1986). "The Soft Budget Constraint," *Kyklos*. Vol. 39, No. 1. pp. 3 – 30.
- Kornai, Janos (1998). "The Concept of the Soft Budget Constraint Syndrome in Economic Theory," *Journal of Comparative Economics*. Vol. 26, No.1. pp. 11 – 17.
- Landes, William M. and Posner, Richard A. (1975). "The Private Enforcement of Law," *The Journal of Legal Studies*. Vol. 4, No. 1. pp. 1 – 46.
- Langan, Patrick A. and Levin, David J. (2002). "Recidivism of Prisoners Released in 1994," *Bureau of Justice Statistics: Special Report*. Washington, DC: U.S. Department of Justice.
- Langbein, John H. (1974). "Controlling Prosecutorial Discretion in Germany," *University of Chicago Law Review*. Vol. 41, No. 3. pp. 439 – 467.
- Lauristen, Janet L. and Schaum, R. J. (2005). "Crime and Victimization in the Three Largest Metropolitan Areas, 1980 – 1998," *Bureau of Justice Statistics: Technical Report*. Washington, D.C.: U. S Department of Justice.
- Lavoie, Don (1985). *National Economic Planning, What is Left?* Cambridge, MA: Ballinger Publishing Company.
- Leeson, Peter T. (2007). "Laws of Lawlessness," *unpublished*. Available at: www.peterleeson.com.

- Leeson, Peter T. (2007). "An-arrgh-chy: the Law and Economics of Pirate Organization," *unpublished*. Available at: www.peterleeson.com.
- Lott, John R. (1987). "Should the Wealthy Be Able to "Buy Justice"?" *The Journal of Political Economy*. Vol. 95, No. 6 pp. 1307 – 1316.
- Lott, John and Mustard, David (1997). "Crime, Deterrence, and Right-to-Carry Concealed Handguns," *Journal of Legal Studies*. Vol. 26, No. 1. pp. 1 – 68.
- Lott, John R. (1998). *More Guns Less Crime, Understanding Crime and Gun Control Laws*. Chicago, IL: University of Chicago Press.
- MacDowell, Douglass M. (1978). *The Law in Classical Athens, Aspects of Greek and Roman Life*. New York, NY: Cornell University Press.
- Madison, James (1788). "The Federalist No. 51," *The Federalist*. New York, NY: Modern Library.
- Maine, Sir Henry Sumner (1861 [2005]). *Ancient Law*. New York, NY: Cosimo Inc.
- Menger, Carl (1963). *Investigations into the Method of the Social Sciences*. Grove City, PA: Libertarian Press.
- Miller, William Ian (1990). *Bloodtaking and Peacemaking: Feud, Law and Society in Saga Iceland*. Chicago, IL: The University of Chicago Press.
- Miron, Jeffrey A. and Zwiebel, Jeffrey (1995). "The Economic Case Against Drug Prohibition," *The Journal of Economic Perspectives*. Vol. 9, No. 4. pp. 175 – 192.
- Mueller, Eva (1968). "Public Attitudes Toward Fiscal Programs," *The Quarterly Journal of Economics*. Vol. 77, No. 2. pp. 210 – 235.
- Murphy, Mark (2002). "The Natural Law Tradition in Ethics," *Stanford Encyclopedia of Philosophy*. Available at: <http://plato.stanford.edu>.
- Myers, Laura B. (1996). "Bringing the Offender to Heel: Views of the Criminal Courts," in T. J. Flanagan and D. R. Longmire (editors) *Americans View Crime and Justice, A National Public Opinion Survey*. London: SAGE Publications.
- National Opinion Research Center (1993). "General Social Surveys 1972 – 1993," *Cumulative Codebook*. Chicago, IL.
- Ormerod, Paul (2005). "Crime: Economic Incentives and Social Networks," *Hobart Paper 151*. Westminster, London: Institute for Economic Affairs.
- Poole, Robert W. (1983). "Why Not Contract Policing?" *Reason* 14 (October).
- Popisil, Leopold (1971) *Anthropology of Law: A Comparative Theory*. New York, NY: Harper and Row.

- Posner, Richard A. (1972). "A Theory of Negligence," *Journal of Legal Studies*. Vol. 29.
- Posner, Richard A (1981). *The Economics of Justice*. Cambridge, MA: Harvard University Press.
- Posner, Richard (2003). "Kelsen, Hayek, and the Economic Analysis of Law," printed in *Law, Pragmatism & Democracy*. Cambridge, MA: Harvard University Press.
- Rizzo, Mario J. (1979). "The Cost of Crime to Victims: An Empirical Analysis," *Journal of Legal Studies*. Vol. 8, No. 1. pp. 177 – 205.
- Ryberg, Jesper (2004). *The Ethics of Proportionate Punishment, A Critical Investigation*. Boston, MA: Kluwer Academic Publishers.
- Sabol, William J., Minton, Todd D., and Harrison, Paige M. (2007). "Prison and Jail Inmates at Midyear 2006," *Bureau of Justice Statistics Bulletin*. Washington, DC: U.S. Department of Justice.
- Sedgwick, Jeffrey L. (director) (2006). "Compendium of Federal Justice Statistics, 2004," *Bureau of Justice Statistics*. Washington, DC: U.S. Department of Justice. Available at: <http://www.ojp.usdoj.gov/bjs>.
- Schafer, Stephen (1960). *Restitution to Victims of Crime*. Chicago, IL: Quadrangle Books, Inc.
- Shukaitis, Marc J. (1987). "A Market in Personal Injury Tort Claims," *Journal of Legal Studies*. Vol. 16, No. 2. pp. 329 – 349.
- Smith, Adam (1776). *Investigations into the Nature and Causes of the Wealth of Nations*. Indianapolis, IN: Liberty Fund.
- Sobel, Russel and Ryan, Matt (unpublished). "Isolating the Political Conviction Cycle," presented at *Association for Private Enterprise Education annual meeting 2007*.
- "Sourcebook of Criminal Justice Statistics," (2003). *U.S Department of Justice, Federal Bureau of Investigation, Crime in the United States*.
- Stigler, George J. (1970). "The Optimum Enforcement of Laws," *The Journal of Political Economy*. Vol. 78, No. 3. pp. 526 – 536.
- Stringham, Edward (1998). "Market Chosen Law," *Journal of Libertarian Studies*. Vol. 14, No. 1. pp. 53 – 77.
- Stringham, Edward (2002). "The Emergence of the London Stock Exchange as a Self-Policing Club," *Journal of Private Enterprise*. Vol. 17, No. 2. pp. 1 – 19.
- Stringham, Edward (2003). "The Extralegal Development of Securities Trading in Seventeenth Century Amsterdam," *Quarterly Review of Economics and Finance*. Vol. 43, No. 2. pp. 321 – 344.
- Tachiki, Scott N. (1995). "Intermediate Sentences in Supermax Prisons Based upon Alleged Gang

Affiliations: A Reexamination of Procedural Protection and a Proposal for Greater Procedural Requirements,” *California Law Review*. Vol. 83, No 4. pp. 1115 – 1149.

Venkatesh, Sudhir Alladi (2006). *Off the Books: The Underground Economy of the Urban Poor*. Chicago, IL: Harvard University Press.

Walmsley, Roy (2005). *World Prison Population List, Sixth Edition*. London, UK: King's College, International Centre for Prison Studies.

Wittman, Donald (1989) “Why Democracies Produce Efficient Results,” *Journal of Political Economy*. Vol. 97, No. 6. pp. 1395 – 1424.

Wormald, Jenny (1980). “Bloodfeud, Kindred and Government in Early Modern Scotland,” *Past and Present*. pp. 54 – 97.

Zane, John M. (1927 [1998]) *The Story of Law: Expanded Second Edition*. Indianapolis, IN: Liberty Fund.

Zywicki, Todd J. and Sanders, Anthony B. (2008). “Posner, Hayek & the Economic Analysis of Law,” *Iowa Law Review*. forthcoming.