

# Differential Victimization: Efficiency and Fairness Justifications for the Felony Murder Rule\*

NUNO GAROUPA, JONATHAN KLICK

*University of Illinois at Urbana-Champaign; University of Pennsylvania*

*The felony murder rule would appear to be an anomaly in the common law. It represents one of the very few instances in criminal law where the element of intent is waived. Criticism of the rule is almost uniform among scholars and commentators, yet it endures in most jurisdictions throughout the United States. Typically, critics assert the rule's longevity is the result of political forces that make it difficult to change laws that make criminal prosecutions easier. Others claim the rule fills some psychological need to mete out retribution when harm occurs to innocent parties. If a justification for the rule is offered, it generally focuses on the deterrence properties of the rule, however empirical research suggests the rule does little to deter felonies or felony murders. We offer a model in which the felony murder rule serves to deter crimes against relatively more vulnerable victims, who would otherwise be more attractive targets of crime in the absence of the rule. This model predicts only a relatively modest decrease in felonies, as perpetrators substitute away from relatively more vulnerable toward less vulnerable victims.*

## 1. INTRODUCTION

Few common law doctrines have come under as much scholarly criticism as the felony murder rule. While the common law includes intent among the elements of the crime of murder, the charge of felony murder can generally be brought whenever a death results from the commission of a felony. That is, even if the perpetrator only intends to rob a victim, if the victim or a third party dies during the course of the robbery, the perpetrator is subject to a murder charge, despite

---

\* We are grateful to one anonymous referee, Eric Helland, Anup Malani, Richard McAdams, Robert Mikos, Steven Shavell and ISNIE 2005 participants for helpful suggestions. Nuno Garoupa acknowledges financial support from Nova Forum and the Portuguese Government, POCI/JUR/55752/2004. Nuno Garoupa, Professor of Law, University of Illinois at Urbana-Champaign, [ngaroupa@law.uiuc.edu](mailto:ngaroupa@law.uiuc.edu); Jonathan Klick, Professor of Law, University of Pennsylvania, [jklick@law.upenn.edu](mailto:jklick@law.upenn.edu).

the absence of *mens rea* regarding the death. Felony murder requires no inquiry into the perpetrator's state of mind with respect to the death that occurs; nor does it require a showing of gross recklessness on the part of the felon.

The felony murder rule's orthogonality to the rest of criminal law has subjected it to derision among legal scholars who tend to attribute the rule's continued existence to political concerns over appearing soft on crime or a collective psychological need to exact a punishment whenever there is some harm done to an innocent victim, even if the harm is completely stochastic in nature. Even the few academic supporters of the rule are forced the deal with the empirical fact that it seems to do little to deter felonies or felony murders. In this context, England and Wales abolished the rule in 1957,<sup>1</sup> and the U.S. Model Penal Code largely rejects the felony murder rule.

However, despite the criticism of the rule, it still remains in force in the majority of states in the U.S.<sup>2</sup> and it is generally thought to have been well-entrenched in the common law of England as it was incorporated in the U.S. (Binder, 2004).<sup>3</sup> In light of these criticisms and evidence that the rule has little measurable effect on the incidence of crime, a puzzle exists as to why the rule has endured even as courts openly question the reasons for its existence.<sup>4</sup>

In this article, we present a model which offers an efficiency-based justification for the felony murder rule that is not undermined by the empirical evidence that the rule provides little benefit in terms of aggregate deterrence. Our model focuses on the notion that some individuals, specifically relatively more vulnerable individuals, represent more attractive victims for the perpetrator of a crime. Because the expected probability of success is higher when a perpetrator targets a relatively more vulnerable victim, more vulnerable individuals will be systematically over-exploited in the absence of the felony murder rule.

---

<sup>1</sup> Until the Homicide Act of 1957, if one kills while engaged in committing a felony which was known to be dangerous to life, and likely in itself to cause death, one becomes guilty of murder. An opposite example is Australia, where the felony murder rule has been codified by section 3A of the Criminal Act of 1958.

<sup>2</sup> Malani (2002) indicates that only four states have abolished the felony murder rule altogether (Delaware, Hawaii, Kentucky, and Michigan), and only two have reduced the punishment for felony murder to that associated with manslaughter (Arizona and Wisconsin). All other states punish felony murder according to the punishments associated with first or second degree murder.

<sup>3</sup> Note that Binder (2004) presents convincing evidence that the felony murder rule, as it is commonly stated and interpreted, is actually a U.S. invention from the 1840s. He presents references to a number of works, however, that date (with little support) the origins of the rule to medieval England and simply assume that it was adopted in America before the U.S. Revolution.

<sup>4</sup> See, for example, *People v. Aaron*, 299 N.W.2d 304, 306 (Mich. 1980) which notes that law students, jurists, and commentators have been perplexed by the rule for generations.

To remedy this victimization differential, it is necessary for the law to provide expected penalties that are a function of victim characteristics.<sup>5</sup> In principle, this could be achieved by investigating crimes against more vulnerable individuals more fastidiously or by uniformly punishing felons who victimize more vulnerable individuals more severely. However, both of these options are unattractive in light of the equal protection provisions of the U.S. Constitution. Further, it is often difficult to categorically identify “the more vulnerable” in sentencing guidelines or criminal statutes.<sup>6</sup>

The felony murder rule, however, solves the problem of generating a differential penalty which, in expectation, increases as a function of a victim’s fragility.<sup>7</sup> That is, if more vulnerable victims are more likely to die coincidentally while they are being victimized, then the felony murder rule is more likely to be triggered. This probabilistic penalty enhancement then will counteract the attractiveness of vulnerable victims in a criminal’s calculus when deciding whom to attack, leading to a social welfare gain relative to the situation in which punishment is invariant to a victim’s characteristics.

In this article, we examine the conventional explanations offered for the felony murder rule, as well as the econometric and experimental evidence offered in their support. We then discuss our intuition and provide formal models of punishment schemes that do and do not take a victim’s characteristics into account. We briefly consider the constraints that disallow explicit conditioning on victim characteristics and show how the felony murder rule avoids those constraints and improves social welfare. We end with a brief discussion of how our model is consistent with the empirical evidence that exists and suggest a more powerful statistical test that is, unfortunately, probably not feasible given data limitations.

## 2. WHY DOES THE FELONY MURDER RULE ENDURE?

As suggested above, the origins of the felony murder rule are murky and its endurance puzzles most scholars who have studied the topic. Superficially, one might speculate that the felony murder rule serves a deterrence function. That is, society has an interest in reducing felonies, and the additional penalty

---

<sup>5</sup> See Dharmapala and Garoupa (2004) and references therein for an economically oriented discussion of differential victimization.

<sup>6</sup> In fact, reality is so complex that, apart from obvious examples, considerations about gender, age, race or medical condition are far from uncontroversial.

<sup>7</sup> Note that the argument is not that the felony murder rule is about more and less vulnerable victims, but that the felony murder rule triggers a mechanism that reduces disparity across victims.

provided by the felony murder rule will deter individuals from engaging in crime, on the margin (Posner, 2003).

However, in principle, society could generate the same deterrence by increasing the general penalty for the felony. Making the additional penalty conditional on an unintended death simply increases the variance of the penalty while duplicating the expected penalty that could be achieved through an across the board increase. Perhaps the rule mitigates the marginal deterrence problem identified by Friedman and Sjoström (1993) to the extent that once an individual has already begun his criminal activity, he will have some incentive to be relatively careful in carrying it out.

Unfortunately, with respect to the general deterrence argument, recent econometric work by Malani (2002) finds in state level panel data that the adoption of the felony murder rule leads to a relatively small decrease in both felony murders and underlying felonies. Secondly, the effect is not robust across crime categories and, for most crime outcomes, the effect is not statistically significant. Malani notes that his paper represents the first research to analyze the deterrence argument empirically.

An additional rationale that has been raised invokes the psychological need people have to apportion blame when innocent parties suffer effectively random harms. Such a need could be evolutionary in nature or it could represent the internalization of some non-consequential philosophical principles. Experimental evidence for this argument is presented in Robinson and Darley (1995). In short, respondents suggested that when individual A is killed because of the negligence of individual B, B should face a lower penalty than if A dies because of the act of individual C who is B's accomplice in the commission of a felony. Lastly, respondents indicated that B should receive the highest penalty if he inadvertently kills A while committing a felony.

Interestingly, however, the experimental evidence suggests that individuals do not wish to see the felony murderer punished as severely as someone who murders with intent. This suggests that the standard formulation of the felony murder rule over-punishes relative to what the psychological or philosophical rationale would seemingly demand. Perhaps this mismatch is due to some inertia in legal rules in the sense that the rule might have matched people's desired punishments during the time of its origin, but has not adapted as preferences have moderated.

One last intuition that is offered as an explanation for the endurance of the rule is a political economy story. Essentially, since criminals have relatively little political power, it is not in a politician's best interest to suggest abandoning the felony murder rule lest he be viewed as being soft on crime. This argument fails to explain the rule's adoption to begin with, and it is not terribly predictive

since it would suggest that politicians should never support any reduction in criminal penalties which is obviously belied by experience.

### 3. THE PROBLEM OF DIFFERENTIAL VICTIMIZATION

We offer a different deterrence rationale for the felony murder rule. We start with the intuition that some victims are more attractive to a criminal than are other victims because they are more easily victimized. That is, all other things equal, a robber would prefer to rob a little old lady than a muscular young man since his chances of success are higher with the more vulnerable victim. Isomorphically, for a given probability of success, it will take less effort to victimize the vulnerable individual.

This implies that, absent some countervailing effect of law enforcement, vulnerable individuals will be systematically over-victimized relative to stronger individuals. If society's normative priors demand that every individual receive equal protection, this differential victimization will generate a social welfare loss.

### 4. SOCIALLY OPTIMAL PENALTIES

In a basic law enforcement model (Polinsky and Shavell, 2000; Dharmapala and Garoupa, 2004), assume that there are two types of victims: Weak or more vulnerable ( $W$ ) and Strong or less vulnerable ( $S$ ). Potential offenders derive a benefit from victimizing  $S$  individuals equal to  $b$ , and they get a benefit of  $b + c$  from victimizing  $W$  individuals, where  $b$  is distributed across the population according to the probability density function  $g(b)$  and  $c$  is a strictly positive constant. In the present context, the interpretation of  $c$  is that potential offenders do not need to exert as much effort to be successful against individuals of type  $W$  and hence receive a higher net gain when they victimize individuals of that type.<sup>8</sup> Notice that the victim's type is perfectly observable by potential offenders. Therefore, ours is a model of victim selection.<sup>9</sup>

Each offense causes a social harm  $b$  with probability  $\sigma_j$  for  $j = W, S$  where  $\sigma_W > \sigma_S$ . That is, while we treat the primary effect of the victimization as a

---

<sup>8</sup> We put  $c$  on the side of benefits to economize on notation. It allows us to normalize the cost to victimize strong individuals to zero. Given that preferences are linear in costs and benefits, this normalization makes no analytical difference.

<sup>9</sup> A more complicated model with asymmetric information concerning victims' attributes would not change the reasoning of our results. However, an advantage of the felony murder rule in that context would be the incentive to acquire information concerning victims' attributes. That would not only improve decision-making by potential criminals, but it would make crime more costly to society thus enhancing the value of deterrence.

pure transfer from the victim to the criminal, there is a stochastic component of harm where the victim loses something that does not constitute a gain to the criminal.<sup>10</sup> Thus, a social loss is generated.<sup>11</sup>

In effect then,  $\sigma_j b$  represents the expected social loss from an offense against individuals of type  $j$ . In the present context, we assume that a potential victim's likelihood of suffering harm conditional on being victimized correlates with his type, while maintaining the normative judgment that social losses from realized harms do not differ by victim type.

From a social planner's perspective, this situation generates two problems for the optimization of social welfare. First, since  $W$  individuals are more cheaply victimized, they will be over-exploited by criminals. Second, in each incidence of victimization,  $W$  individuals are more likely to suffer social harm  $b$ .

More formally, we model the social planner's problem as follows: Within the population of potential victims,  $\alpha$  are of type  $S$  and  $1 - \alpha$  are of type  $W$ . We assume that the likelihood of a criminal being apprehended and convicted is exogenously set at  $p$ .<sup>12</sup> For convenience, and without loss of generality, we frame the punishment in terms of fines which are assumed to be costless to transfer as in the general Beckerian set-up.<sup>13</sup> We allow fines to differ by victim type. Thus, the optimal fines  $f_w$  and  $f_s$  are determined by maximizing the following standard social welfare function (net benefits from crime):

$$(1) \quad W = \alpha \int_{pf_s}^{\infty} (b - \sigma_s h) dG(b) + (1 - \alpha) \int_{pf_w - c}^{\infty} (b + c - \sigma_w h) dG(b)$$

which yields the following first order conditions (we assume that second-order conditions are satisfied):

---

<sup>10</sup> Alternatively, we normalize to zero the social harm caused by the felony alone.

<sup>11</sup> How the social loss is apportioned between victim and society in general is not a matter of concern in the model.

<sup>12</sup> We implicitly assume that the probability of conviction cannot be conditioned on the attributes of victims which seems plausible. Were the probability of conviction to vary with the attributes of victims, the optimal fines would be maximal in the usual Beckerian sense and the results we discuss for the fines would be replicated for the probabilities in the same way. For example, because we have assumed that  $\sigma_w > \sigma_s$ , we would have  $p_w > p_s$ . In section 5, since the probability has to be the same for weak and strong potential victims, then we would have  $p_w > p > p_s$ . Finally, in section 6, the optimal fine for the more vulnerable would be maximal whereas for the less vulnerable would be less than maximal and the probability should be adjusted accordingly.

<sup>13</sup> This way we can ignore the costs of punishment which would make the mathematical analysis more cumbersome without further gains in comprehension.

$$(2) \quad \frac{\partial W}{\partial f_s} = \alpha (\sigma_s h - p f_s) g(p f_s) p = 0$$

$$(3) \quad \frac{\partial W}{\partial f_w} = (1 - \alpha) (\sigma_w h - p f_w) g(p f_w - c) p = 0$$

These conditions imply that the efficient fine takes the general form of:

$$(4) \quad f_j = \frac{\sigma_j h}{p}$$

That is, we should apply the classic multiplier principle.<sup>14</sup> The same underlying offense should be punished differently according to the characteristics of the victim where those criminals victimizing the weak receive a larger fine than those who target the strong.

If we examine the differential in optimal expected fines levied in cases where weak individuals are victimized relative to cases where strong people are the target, we notice that:

$$(5) \quad p \cdot f_w - p \cdot f_s = (\sigma_w - \sigma_s) \cdot h$$

Thus, the differences in fines should depend on the differential in the likelihood of suffering harm (beyond the net transfer that takes place between the criminal and the victim) between the two victim types, as well as the social harm itself.<sup>15</sup>

## 5. WHY DON'T WE CONDITION ON VICTIM CHARACTERISTICS DIRECTLY?

Given the theoretical result above, it would seem simple enough to remedy differential victimization by conditioning punishments on victim characteristics directly. However, there are at least two problems with doing this. First, philosophical concerns, such as those institutionalized in the equal protection

---

<sup>14</sup> For sake of discussion, we assume away problems cause by judgment-proof.

<sup>15</sup> It is trivial to extend this model to allow the criminal to consider the attributes of bystanders as well. For example, all other things equal, attacking a victim during a bingo game at the retirement home is more attractive to a criminal than attacking a victim at Gold's Gym because of the relative likelihood that a bystander will successfully intervene in the attack. Note that the felony murder rule also applies when a bystander dies, generating the same kind of differential deterrence captured in our primary model, offsetting the incentive to attack in a scene where bystanders are vulnerable.

provisions of the Fourteenth Amendment to the U.S. Constitution, make it problematic or even unlawful to condition penalties on some characteristics that may be proxies for fragility.<sup>16</sup>

For example, it would clearly be held unconstitutional if a legislature used racial stereotypes as the basis for its vulnerability proxies by saying that crimes against black individuals will be punished less severely than crimes against white individuals even if there was some rational basis for believing that the average black person is more physically fit than the average white person. On the other hand, some potential proxies for fragility have been contemplated or enacted to condition penalties such as the Violence Against Women Act which provided, among other things, for higher penalties for sexual assault if the victim is very young. The Federal Sentencing Guidelines also included some penalty enhancements based on victim characteristics such as age.

A deeper problem with operationalizing the optimal fines generated in the model above is that it may not be feasible to define *ex ante* which broad characteristics indicate an individual is of type  $W$  or type  $S$ , and, presumably, the types are continuous making categorical differentiations somewhat arbitrary. Thus, it may be possible for a criminal to observe characteristics that indicate relative strength, but it is unlikely that a legislature could detail all of these characteristics in a principled way *ex ante*. Further, making the fragility decision *ex post* has the potential to lead to capricious decisions on the part of prosecutors and might even run afoul of constitutional prohibitions against *ex post facto* laws.

Thus, if we are not able to differentiate penalties by victim characteristics and are forced to determine a single penalty for an underlying criminal act, the social welfare function will take the following form:

$$(6) \quad W = \alpha \int_{pf}^{\infty} (b - \sigma_s h) dG(b) + (1 - \alpha) \int_{pf-c}^{\infty} (b + c - \sigma_w h) dG(b)$$

leading to a single first order condition of the form (we assume that the second-order condition is satisfied):

$$(7) \quad \frac{\partial W}{\partial f} = \alpha (\sigma_s h - pf) g(pf) p + (1 - \alpha) (\sigma_w h - pf) g(pf - c) p = 0$$

which implies an efficient fine level where:

---

<sup>16</sup> Although, in some jurisdictions, certain victim's attributes can constitute a reason for penalty aggravation when determining the appropriate sentence within the range of possible sentences.

$$(8) \quad f = \frac{\alpha \sigma_s g(pf) + (1-\alpha) \sigma_w g(pf-c)}{\alpha g(pf) + (1-\alpha) g(pf-c)} \cdot \frac{h}{p}$$

Intuitively, this pooled fine level represents an overly severe fine with respect to attacks on strong victims and a fine that is not severe enough with respect to attacks on weak victims, relative to the social optimum in which we have two degrees of freedom in fine determination. In other words, from an efficiency perspective, too many weak and too few strong victims are targeted.

## 6. FELONY MURDER RULE AS A PROBABILISTIC PENALTY ENHANCEMENT

If for some philosophical (e.g., all life has equal worth) or constitutional (e.g., equal protection under the law) reason we constrain our punishment such that both strong and weak individuals face the same likelihood of being victimized, then it must be the case that  $G(pf_s) = G(pf_w - c)$  which implies that

$f_w = f_s + \frac{c}{p}$ . That is, we set the strong vs. weak victim penalty differential such

that it erases the additional benefit of attacking a weaker individual ( $c$ ) scaled up by the standard multiplier to account for imperfect enforcement.

Under such a constraint, the social welfare function now becomes:

$$(9) \quad W = \alpha \int_{pf_s}^{\infty} (b - \sigma_s h) dG(b) + (1-\alpha) \int_{pf_s}^{\infty} (b + c - \sigma_w h) dG(b)$$

which yields the following first order condition (assuming the second-order condition is satisfied):

$$(10) \quad \frac{\partial W}{\partial f_s} = \alpha (\sigma_s h - pf_s) g(pf_s) p + (1-\alpha) (\sigma_w h - c - pf_s) g(pf_s) p = 0$$

generating optimal fines:

$$(11) \quad f_s = \frac{\alpha \sigma_s h + (1-\alpha) \sigma_w h - (1-\alpha) c}{p}^{17}$$

---

<sup>17</sup> We assume that the benefit  $c$  is defined in a range of values such that the fine is always strictly positive, otherwise we would end up with a nonsense result of subsidizing offenses against the strong just to impose equal protection under the law because the benefit from targeting the weak is huge.

$$(12) \quad f_w = \frac{\alpha\sigma_s h + (1-\alpha)\sigma_w h + \alpha c}{p}$$

The felony murder rule appears to operationalize these theoretical implications. First, fulfilling the efficiency condition laid out in equation 4, it generates a probabilistic penalty enhancement that increases in expectation in the victim's underlying fragility since it only applies when someone inadvertently dies during the commission of a felony. Further, by making the penalty quite high (generally equivalent to that reserved for first or second degree murder), the rule implicitly recognizes the high social cost of the victim's death. In effect, we induce the criminal to internalize the full social cost of his crime which includes the chance that someone may die in the process of committing the crime.

Second, to the extent that we worry about the over-victimization of the weak (even beyond the fact that they are more likely to die generating a social cost) on normative grounds, the felony murder rule creates a penalty enhancement that offsets the attraction of weak victims. This meets the characteristics of the optimal fines laid out in equations 11 and 12.

This analysis indicates that the felony murder rule will satisfy the unconstrained efficiency condition of equation 4 as well as the equal protection constraints embodied in equations 11 and 12 when the following condition holds:

$$(13) \quad c = (\sigma_w - \sigma_s)h$$

That is, if the ease with which a victim can be overpowered is proportional to the gap between the likelihood of the victim suffering harm beyond the transfer from him to the criminal. As long as this proportionality holds such that individuals who are more easily victimized are also more likely to die during the underlying felony, the felony murder rule satisfies these two attractive normative criteria: efficiency and equal protection.

Of course, in a world of perfect information, we could simply legislate that the penalty enhancements suggested by the formal models apply depending upon which type a victim is. However, in reality, principled categorization will be difficult as types will actually be continuous and proxies will be imperfect. Also, evidentiary problems will be large as prosecutors will attempt to argue that victims were obviously weak, while criminals will claim that they had no idea about the victim's fragility. In a sense, the felony murder rule by-passes these problems in a Bayesian sense by taking the victim's death as evidence of his fragility at which point the penalty enhancement is triggered.

## 7. A POTENTIAL TEST

Our model of the effect of the felony murder rule suggests two important implications. There should be a small aggregate deterrence effect of moving from a context where there is no felony murder rule to one where the underlying felony penalty is not changed but the felony murder rule is adopted. The felony murder rule normalizes the attractiveness of victims. That is, in the absence of the felony murder rule, there are some marginal crimes that will be committed only because the more vulnerable individual is an especially good target, but those crimes cease when the rule is adopted.

Perhaps more important, our model suggests that the composition of victims should be different in jurisdictions that adopt the felony murder rule. While it is not possible to categorize people perfectly, we might expect that women are more likely to be victimized in places that do not have the felony murder rule on the margin relative to men, all other things equal. We might also expect to find an age effect, where the very young and the very old are subjected to marginally more felonies in states without the felony murder rule as compared to states that do have the rule.

Unfortunately, victim characteristic data for non-murder crimes is not systematically collected in the United States. This limitation hinders any econometric test of our hypothesis, though perhaps more general survey data can be exploited in this regard.

## 8. CONCLUSION

The felony murder rule is generally regarded as a puzzle in legal scholarship. Most academic commentators and many judicial opinions have expressed contempt for a rule that seems to be orthogonal to the main pillars of criminal law. The seemingly random and unplanned nature of the felony murder make it difficult for many individuals to apply the rule in good conscience, leading the authors of the Model Penal Code to drop the rule altogether.

Even those individuals who offer a deterrence rationale for the rule are faced with a problem. Robust empirical support for the deterrence hypothesis does not exist and the probabilistic nature would appear to make the rule inferior for deterrence purposes to simply raising the penalty for the underlying felony. The rule does not even appear to fit the experimental evidence regarding how harshly individuals would like to punish criminal actions that lead to an unintended death, as it generally requires a more severe punishment than respondents would choose if given discretion.

In the context of this puzzle, we offer a slightly more sophisticated deterrence argument for the felony murder rule. We show that the contours of the rule seem to mirror the kind of optimal rule generated from a social welfare function that recognizes that vulnerable individuals are more attractive victims for criminals because of the relative ease with which vulnerable victims can be exploited and the weak are more likely to suffer losses above the mere transfer that generally takes place in a felony. We argue that the felony murder rule offsets the relative attraction of vulnerable victims and induces criminals to internalize the social losses their crimes are likely to generate. Further, if the relative ease with which more vulnerable individuals are victimized is proportional to their likelihood of perishing during an attack, the felony murder rule is also consistent with a normative principle requiring all individuals to face an equal likelihood of victimization.

While one might argue that the evolutionary nature of the common law is likely to tend toward such an efficient rule (see, for example, Posner [2003] or Rubin [1977]), we merely demonstrate that the rule might not deserve the derision it has traditionally engendered. Instead, it appears to be simultaneously consistent with both efficiency and a common conception of fairness.

## References

- Binder, Guyora. 2004. "The Origins of American Felony Murder Rules," 57 *Stanford Law Review* 59-208.
- Dharmapala, Dhammika, and Nuno Garoupa. 2004. "Penalty Enforcement for Hate Crimes: An Economic Analysis," 6 *American Law and Economics Review* 185-207.
- Friedman, David, and William Sjoström. 1993. "Hanged for a Sheep: The Economics of Marginal Deterrence," 22 *Journal of Legal Studies* 345-366.
- Malani, Anup. 2002. "Does the Felony Murder Rule Deter? Evidence from FBI Crime Data." *Unpublished Working Paper* available at <http://www.law.virginia.edu/home2002/pdf/malani/FelonyMurder021111Rand.pdf>.
- Polinsky, Mitchell, and Steven Shavell. 2000. "The Economic Theory of the Public Enforcement of Law," 38 *Journal of Economic Literature* 45-76.
- Posner, Richard. 2003. *Economic Analysis of Law*, 6<sup>th</sup> ed. New York: Aspen Publishers.
- Robinson, Paul, and John Darley. 1995. *Justice, Liability & Blame: Community Views and the Criminal Law*. Boulder, CO: Westview Press.
- Rubin, Paul. 1977. "Why Is the Common Law Efficient?" 6(1) *Journal of Legal Studies* 51-63.