

Why Do We Punish? Deterrence and Just Deserts as Motives for Punishment

Kevin M. Carlsmith and John M. Darley
Princeton University

Paul H. Robinson
Northwestern University

One popular justification for punishment is the just deserts rationale: A person deserves punishment proportionate to the moral wrong committed. A competing justification is the deterrence rationale: Punishing an offender reduces the frequency and likelihood of future offenses. The authors examined the motivation underlying laypeople's use of punishment for prototypical wrongs. Study 1 ($N = 336$) revealed high sensitivity to factors uniquely associated with the just deserts perspective (e.g., offense seriousness, moral trespass) and insensitivity to factors associated with deterrence (e.g., likelihood of detection, offense frequency). Study 2 ($N = 329$) confirmed the proposed model through structural equation modeling (SEM). Study 3 ($N = 351$) revealed that despite strongly stated preferences for deterrence theory, individual sentencing decisions seemed driven exclusively by just deserts concerns.

There are many situations in which people wish to punish another. When a person is unjustly harmed through assault or robbery, people typically experience a strong desire to punish the offender. From a psychological point of view, what is the source of this motivation, the justification for this behavior? When people, as voters, jurors, and citizens, exact punishment from a perpetrator for violating societal norms, what are they trying to achieve? In short, why does society punish?

Our concern in this article is with the psychology of punishment, specifically with the punishment motives of ordinary people. This question is one that has faced societies for centuries, so it is useful to begin by examining the justifications provided by philosophers and legal system theorists for punishments within that system. When we do so, however, we find a useful list of possible reasons but also disagreement about which reason is the right one. Although most scholars agree that punishment in some form is necessary, they disagree on the underlying reason that makes punishment an appropriate and justified response to social norm violations. Some claim that punishment's primary purpose is to pay back harm doers for their past crimes; others claim that its function is to prevent or reduce future crimes.

As this debate suggests, there are two broad justifications for the use of punishment. One perspective holds that when an individual harms society by violating its rules in some normatively unallow-

able way, the scales of justice are out of balance, and sanction against the individual restores this balance. Under this perspective, the perpetrator deserves to be punished in proportion to the past harm he or she committed. The punishment is an end in itself and needs no further justification. This approach is typically referred to as a just desert or deservingness perspective. In the late 18th century, Immanuel Kant (1952) argued that "punishment can never be administered merely as a means for promoting another good" and should be "pronounced over all criminals proportionate to their internal wickedness" (p. 397).

An opposing perspective holds that social harmony is best served by the prevention of future harm and that the justification for punishment lies in its ability to minimize the likelihood of future transgressions. This rationale is outcome focused in that it seeks some particular future purpose by administering the punishment. This approach is referred to as utilitarian or consequentialist and is most often associated with Jeremy Bentham (1962), a contemporary of Kant. He argued that "general prevention ought to be the chief end of punishment, as it is its real justification" (p. 396).

In this article, we consider the lay psychology of punishment by reporting research that attempts to determine the punishment-assigning motives of ordinary people. This is, in terms Heider (1958) invited us to use, an exploration of the naive psychology of punishment. The two specific motives we contrast are just deserts and deterrence. Our research asks which of these two justifications best describes the motivation of ordinary citizens when they opt to sanction another. Specifically, we ask whether lay intuition operates from a deservingness perspective, in which the focus is on atoning for the harm committed, or from a utilitarian, deterrence perspective, in which the focus is on preventing future harms against society.

There are two general sorts of reasons why we should be interested in the question of what motivates punishment in ordinary people's thinking. The most important reason is a psychological one. What is it that people in a society seek to do when they

Kevin M. Carlsmith and John M. Darley, Department of Psychology, Princeton University; Paul H. Robinson, School of Law, Northwestern University.

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Correspondence concerning this article should be addressed to Kevin M. Carlsmith, who is now at the Department of Psychology, University of Virginia, 102 Gilmer Hall, P.O. Box 400400, Charlottesville, Virginia 22904-4400, or to John M. Darley, Department of Psychology, Princeton University, Princeton, New Jersey 08544. E-mail: carlsmith@virginia.edu or jdarley@princeton.edu

punish actors who intentionally commit known wrong actions? Perhaps because everyone has instantly available intuitions that supply their own definitive answers about this, people generally have failed to notice that there are no research-based answers to this rather fundamental question about human nature.

The second reason concerns social policy and public compliance with criminal law. As we have argued elsewhere (Darley, Carlsmith, & Robinson, 2001; Robinson & Darley, 1995), an individual is more likely to voluntarily comply with legal codes when he or she perceives that the system treats people fairly—that is, according to his or her intuitions about what is just. Indeed, Tyler (1990) has found that perceived procedural justice is the best predictor of voluntary compliance with the law.

Philosophical Justifications for Punishment

Just Deserts Theory

The theory of just deserts is retrospective rather than prospective. The punisher need not be concerned with future outcomes, only with providing punishment appropriate to the given harm. Although it is certainly preferable that the punishment serve a secondary function of inhibiting future wrongdoing, its justification lies in righting a wrong, not in achieving some future benefit. The central precept of just deserts theory is that the punishment be proportionate to the harm. The task of a just deserts theorist, then, is to assess the magnitude of the harm and to devise a punishment that is proportionate in severity, if not in kind. Kant (1952) recommended censure proportionate to a perpetrator's "internal wickedness," a quantity that may be approximated by society's sense of moral outrage over the crime.

There are several core components of an offense that determine moral outrage and the magnitude of punishment according to just deserts theory. It is these factors, then, that should trigger the motive to punish if people adhere to a just deserts theory of punishment.

Magnitude of harm. First and perhaps most important is the magnitude of intended harm. This is indexed most typically by the type of crime (e.g., petty theft, felonious assault) and the degree to which it offends the sensibilities of citizens. A growing body of research (Darley, Sanderson, & LaMantia, 1996; Kahneman, Schkade, & Sunstein, 1998; Rossi, Waite, Bose, & Berk, 1974; Warr, Meier, & Erickson, 1983) demonstrates the considerable consensus regarding the rank ordered severity of various offenses.

Extenuating circumstances. Second, mitigating or exacerbating circumstances often affect the moral outrage felt by citizens and, hence, the magnitude of punishment that is called for under the just deserts theory. A person who embezzles to maintain a lavish and lascivious lifestyle is judged more harshly than one who embezzles the same amount for the relatively noble purpose of subsidizing the company's underpaid and exploited overseas workers. Although the amount of harm is constant in this example, the punishment is not. Just deserts theory is highly sensitive to such contextual factors that mitigate or exacerbate the degree to which a perpetrator deserves punishment (Finkel, Maloney, Valbuena, & Groscup, 1996; Robinson & Darley, 1995).

A fully formed theory of just deserts is concerned with more than just these factors. For example, an expression of remorse (or lack thereof) speaks directly to the moral outrage evoked in a

victim or observer (LeBoeuf, Carlsmith, & Darley, 2001). However, remorse also signals the possibility that the outcome may have been accidental and may raise questions of the perpetrator's responsibility for the harm. Moreover, it may also signal the likelihood that the perpetrator will repeat the harm. Remorse is associated with numerous justifications of punishment and thus does not uniquely differentiate one motive from another. Magnitude of harm and extenuating circumstances are notable because they are the components of just deserts theory that differentiate it from utilitarian theories.

Deterrence Theory

The utilitarian label encompasses several distinct justifications. The best known of these is deterrence theory, which holds that an offender's punishment should be just sufficient to prevent future instances of the offense. Deterrence theory (see Nagin, 1998, for a review) is generally grounded in the assumption that the potential criminal, like other citizens, is a rational actor.¹ It works by changing the costs and benefits of the situation so that criminal activity becomes an unattractive option. Jeremy Bentham (1962) stated, "If the apparent magnitude, or rather value of [the] pain be greater than the apparent magnitude or value of the pleasure or good he expects to be the consequence of the act, he will be absolutely prevented from performing it" (p. 396). Most forms of punishment that fit this description—fines, jail time, corporal punishment—are designed to induce all individuals to complete the cost-benefit analysis and to generally inhibit them from perpetrating the harm in the first place.

As before, there are several elements of an offense that are of paramount importance to deterrence theory but that are wholly irrelevant to just deserts theory. These elements do not represent the exhaustive list of deterrence factors; rather, they are the discriminant elements that uniquely instantiate deterrence theory.

Detection. Deterrence is based on a rational choice model, and, thus, the likelihood of detection and prosecution factor heavily in its calculus. In general, crimes that are unlikely to be detected require correspondingly more severe penalties to maintain the same expected value of punishment. Thus, crimes with little or no chance of detection should receive relatively severe punishment in those instances when they are detected; conversely, crimes with a detection probability approaching 100% require no such escalation—the expected value of punishment approaches the actual punishment given. The hanging of paupers for petty thievery in 18th century Britain represents one instance in which low detection rates rather than magnitude of the harm probably determined the punishment (see D. A. Anderson, in press).

Publicity. When a perpetrator is caught, it is desirable to ensure that others learn the consequences of violating the rule. Accordingly, it is important that wrong doers be punished publicly and severely so that other potential criminals learn by example. It

¹ But see D. A. Anderson (in press) for evidence that this rationality begins and ends with those who write the laws. Anderson revealed that those individuals who run afoul of the laws had very little veridical knowledge of the likelihood that their crime would be detected, the likely punishment for their crime if they were caught, or the penal process in general. In other words, the assumption of rationality in the criminal population may be unwarranted.

follows that punishment need not be proportional to the harm of the crime but rather to the amount of publicity it will acquire. From a general deterrence perspective, a private punishment serves no purpose and thus is an immoral act. Conversely, cases that receive increasing amounts of publicity should receive corresponding increments of punishment. Those who call for harsh penalties to make an example of the perpetrator may be doing so from a deterrence perspective; those who complain about the unfairness of such a process are probably doing so from a just deserts perspective.

In summary, then, deterrence theory requires that the crime rate and publicity of the sentence be proportionate to the severity of the punishment but that detection rate and punishment be inversely proportionate to each other. Moreover, deterrence theory is relatively unconcerned with the magnitude of the harm or the mitigating circumstances, which are of critical importance to desert theory. Although a deterrist is certainly sensitive to other factors (e.g., culpability,² celerity of punishment), it is the factors described above that uniquely define deterrence theory.

Incapacitation Theory

There is a second form of utilitarian theory. If the goal is to prevent future crime, then the simplest means to achieve this is to incapacitate those who have trespassed previously. Incapacitation theory has less ambitious goals than does deterrence theory; it simply aims to make it impossible for a person who has offended before to offend again. Its focus is on restraining a person who has proved himself or herself dangerous, generally by committing a past crime, so he or she cannot commit more crimes (see Zimring & Hawkins, 1995, for a review).³

Psychological Literature on Punishment

A review of the psychological literature on this topic turns up an abundant body of research on the effects of punishment on the target of the punishment. A large and diverse group of researchers, ranging from behavior analysts (e.g., Nevin, 1989; Watson, 1924) to personality psychologists (e.g., Corr, Pickering, & Gray, 1997; Patterson, Kosson, & Newman, 1987), have given us detailed accounts of how punishment affects behavior. Relatively little attention, however, has been paid to the motivation of the one who assigns the punishment. From a strictly behaviorist point of view, punishment changes the contingencies associated with various operants and is thus a strictly utilitarian act. So psychologists, like many others, may think of punishment as motivated to suppress certain behaviors—in other words, to deter (Butterfield, Trevino, & Ball, 1997).

Such a view has empirical support, although it is far from voluminous. Vidmar and Miller (1980) proposed a social-psychological account of punishment based on a wide range of factors, including situational, personal, utilitarian, and expressive goals. Their behavioral-control model represents a utilitarian approach that links punitiveness to the desire to control the future behavior of the rule breakers and those who might emulate them. The model hypothesizes that people should be especially punitive toward the criminals who are most likely to commit future crimes because punishment is believed to be an effective deterrent to the perpetrator or others. Consistent with this, several studies on

capital punishment (Ellsworth & Ross, 1983; Vidmar, 1974; Vidmar & Ellsworth, 1974) have revealed that when asked to provide an explanation or justification for assigning punishment, individuals strongly endorse utilitarian ideals. Indeed, in each of these studies, the modal response was that capital punishment serves a deterrence function.

However, a closer examination of these responses reveals a more complicated picture. As Vidmar and Miller (1980) discussed, when supporters of deterrence theory are provided with incontrovertible evidence on the inefficacy of deterrence, their attitudes regarding capital punishment do not change (Ellsworth & Ross, 1983). This strongly suggests that the basis for these attitudes may well be rooted in something other than deterrence. Moreover, Tyler and Weber (1983) tested certain hypotheses that follow from the behavioral-control model and found no support. Specifically, they found that fear of crime, evaluation of the crime rate, or having been a victim of rule breaking are not strong predictors of punitiveness, casting doubt on wholly utilitarian accounts of why people punish.

Numerous other studies indirectly suggest that the motivation for punishment may be rooted in nonutilitarian motives. In a series of four experiments, Alicke (1992) showed that people are inclined to attribute causal responsibility for a negative event to the most morally blameworthy of multiple factors. He found that people blame the driver of an accident rather than other plausible factors (e.g., an oil slick, a blind intersection, another driver) when that driver was on an immoral errand but not when he or she was on a moral errand. The fact that culpability and punishment are closely linked to the morality of the action suggests that punishment in these cases is driven by just deserts motives.

Recent work by Tetlock and colleagues (Fiske & Tetlock, 1997; Tetlock, Peterson, & Lerner, 1996) identifies moral outrage as a critical component in the determination of punishment. These authors have shown that taboo trade offs such as ascertaining the fiscal value of citizenship, body parts, or happy relationships give rise to strong and immediate reactions of moral outrage. Fiske and Tetlock (1997) asserted that measures of moral outrage substantially predict punitiveness and punitive intent. Extending this work, Lerner, Goldberg, and Tetlock (1998) found that factors associated with just deserts and moral outrage contribute substantially to attributions of responsibility and to punitive behavior. In

² In fact, a strict interpretation of deterrence theory does not require culpability. For the purposes of general deterrence, it is not necessary to punish the actual perpetrator. All that is required is that society (specifically, the society of potential criminals) believe that the perpetrator has been caught and punished. As long as the fiction of appropriate punishment is believed, the theory of deterrence is silent as to whether the punishment be real or sham and whether it is carried out on the perpetrator or on an innocent. However, it is difficult to find anyone who would endorse such an extreme interpretation of deterrence theory as a general policy.

³ In a previous study (Darley, Carlsmith, & Robinson, 2000), we conducted several experiments that tested whether people operate primarily from a deservingness approach or from an incapacitation approach. Results from this research indicated that the best predictor of punishment was the seriousness of the crime and, in particular, the degree of moral outrage elicited by the crime. Except in extraordinary circumstances, people are insensitive to the perceived dangerousness of the criminal and the perceived likelihood of recidivism.

their studies, anger (a component of moral outrage) provoked in an unrelated domain significantly predicted punishment but was mediated by accountability. These results are consistent with other theorizing (e.g., Fiske & Tetlock, 1997) that the just deserts motive is composed of both affective and cognitive components, and it reinforces the observation that anger is of central importance in punitiveness. This research is consistent with the hypothesis that lay theories of punishment are rooted in just deserts but does not test whether people are equally motivated by other, more utilitarian factors.

These studies primarily speak to the factors that determine attributions of responsibility. Responsibility, in turn, drives punitive intent such that as responsibility for a harmful outcome increases, so, too, does the punishment assigned to the actor. Culpability is normally a precursor to punishment and thus is equally relevant regardless of why a person punishes. These studies, therefore, do not differentiate between the various motives that may be driving the punitive intent. Rather, they focus on when a person forms a generalized punitive intent. It is a distinction of “should we punish” versus “why should we punish.” The research presented in this article addresses a related but distinct question: When culpability is unambiguously attributed to the actor, what psychological function does punishment fulfill?

Hypotheses

Our working hypothesis follows from the research described above. It also receives some support from a previous study (Darley, Carlsmith, & Robinson, 2000) in which we pitted just deserts motives against incapacitative ones and found that sentences were determined by just deserts motives. More generally, it follows from a long tradition of judgment and decision-making research that consistently reveals that individuals deviate from utilitarian economic models of self-interest (e.g., Kahneman & Tversky, 1979; Tversky & Kahneman, 1981). In brief, we predict that people will be highly sensitive to variation in the factors associated with just deserts and largely insensitive to the factors associated with deterrence. If the results of the present study suggest that just deserts motives are the central ones in determining sentencing, we will then try to articulate a unified, intuitively compelling account of the just deserts perspective; however, we defer this question until we see what the evidence tells us about sentencing justifications.

Empirical Approach

How are we to research this question? In a previous era, in which a number of different punishments were available for infliction on offenders, one could at least sometimes infer punishment purpose from the choice of punishment. Exile, for instance, was a way of incapacitating an individual from future harms to the community from which he or she was driven. But now the current penal system in the United States tends toward a singular form of punishment. Regardless of the punisher’s specific motive, be it just deserts, incapacitation, or deterrence, the sentence is likely to be calibrated by time in jail.⁴ It is not obvious how to reason back from sentence length to sentence motive, particularly when judges rather than jurors assign the sentence.

A second, obvious way to conduct this research would be simply to ask people which of the several philosophies they prefer and assume the accuracy of those reports. There are several problems with this self-report approach. In studies that administer scales to measure people’s agreement with various reasons for punishment, people tend to agree with them all. They all sound socially desirable, and there is no reason to choose among them (M. C. Anderson & MacCoun, 1999). Also, we know that people are sometimes unaware of the actual reasons that lie behind their decisions (Nisbett & Wilson, 1977) and may select postdecisionally a number of possible reasons on the basis of plausibility or social desirability. Thus, the reasons they construct may correspond poorly to the actual reasons for their decisions.

Suspecting that these considerations might be important in the case of justifications for punishments, we chose a scenario approach in which we presented respondents with descriptions of a variety of harm-doing actions and examined the patterns of punishments assigned. This policy-capturing approach (Cooksey, 1996) relies on behavioral intentions rather than self-reports and is often used when participants may be unable to explicitly weight and integrate the elements involved in complex decisions. In keeping with this approach, we gave respondents short vignettes to read and varied different elements of the crime, elements that should or should not matter to the respondent depending on which sentencing motive he or she held. The degree to which his or her sentence recommendation is influenced by each of these variables provides a clue to the respondent’s underlying motivation for the punishment given. We could use this research tactic because different sentencing philosophies disagree on which elements of a crime are relevant to the sentencing. We expected to see variation in the severity of assigned punishment, and we use the magnitude of the variation of punishment severity as roughly indicating the importance of the variation in the just deserts or deterrence variables.

In keeping with this logic, the cases contained two dimensions of variation. If people assign punishments for criminal acts from a just deserts perspective, then factors that influence a perpetrator’s punishment deservingness should directly influence the assigned punishment. If, however, people punish from a utilitarian perspective such as deterrence, then the relative deservingness of a perpetrator should be unimportant, and deterrence-relevant factors should instead be most important. The research question then becomes, Which, if any, variation affected the respondents’ assignments of punishments?

The factors that correspond to each theory were rationally drawn from the writings of legal scholars and moral philosophers. However, because this article is concerned with the psychology of ordinary persons, we first validated that ordinary people perceived these factors as uniquely relevant to each appropriate philosophy. In other words, to prevent a test between just deserts and deterrence from becoming a straw man, it was critical that we demonstrate that participants—as well as moral philosophers—understood the logic that led from theory to empirical instantiation.

⁴ In fact, incarceration (and other common forms of punishment) fulfill the functions of both just deserts and utilitarian theory. Although it is possible to customize penalties that uniquely address one function or the other, the current penal system rarely incorporates them in sentencing.

Validation Study

The purpose of this study was to demonstrate that individuals perceived the proposed connections between each philosophy and the variables that we hoped instantiated them. We expected that the just deserts items (e.g., magnitude of harm, motivation) would be recognized as critical to just deserts theory and that, likewise, the items for deterrence (e.g., detection rate, publicity) would be recognized as critical to a deterrence philosophy of punishment.

Pilot work indicated that respondents were more comfortable if they were provided with some definitions of the various theories, so we gave them descriptions drawn from various readings on punishment theories. We worried that, with this method, the descriptive paragraphs might have signaled the supposedly correct answer. To do what we could about this, we ensured that the paragraph wordings avoided any specific reference to key words from the individual items being tested.

Method

One hundred seventeen Princeton University students completed a short survey for pay as part of a larger mass-testing session. Participants read short paragraphs derived from standard philosophy texts that described the just deserts and deterrence philosophies and then classified nine pieces of information as belonging to one (or none) of these perspectives in a forced choice paradigm. Two of the items belonged to just deserts (magnitude of harm, extenuating circumstances), two belonged to deterrence (detection rate, publicity), and five control items belonged to neither (age, gender, etc.). Thus, for example, participants classified statements such as the following into one of three categories: "Detection rate: is this a difficult or an easy crime to catch, and how likely is it that any given perpetrator will be caught, prosecuted, and punished for this type of crime?" Order of questions and descriptions were counterbalanced between participants.

Results

One measure of the appropriateness of these instantiations is the degree to which participants were able to accurately discriminate among items and assign them to their intended classification. Table 1 reveals the frequency with which each item was classified to each perspective. In general, the empirical classifications matched the rational classifications. On average, 72% of the classifications were correct, indicating that participants generally understood the relationship between each instantiation and its corresponding phi-

Table 1
Validation of Materials: Empirical Classification of Individual Items Into Categories of Philosophical Justification

Item evaluated	Philosophical justification			$\chi^2(21, N = 117)$
	Just deserts (%)	Deterrence (%)	Other (%)	
Just deserts items				
Magnitude of harm	76	16	9	88.5*
Extenuating circumstances	69	14	17	64.9*
Deterrence items				
Detection rate	10	68	23	58.5*
Publicity	11	76	14	87.9*

* $p < .001$.

losophy. The least accurately classified element was detection rate; it was identified as relevant to deterrence theory by 68% of the sample, relevant to just deserts theory by 10%, and relevant to other theories by 23%.

Discussion

The goal of this study was to validate the step that led from the basic theories of punishment to the specific, empirical realizations of just deserts and deterrence. The results provide evidence that participants perceived these variables as predicted and allay, to some extent, concerns that the empirical instantiation of just deserts and utilitarian theories missed their mark.

An alternative validation study suggested by a reviewer might have extracted the factors that define participants' naive theories of deterrence and just deserts and let these empirical factors serve as stimulus materials rather than the rational factors we selected. This approach has merit, particularly if one is attempting to develop a theory from scratch and wants to ensure that one's own biases and preconceptions do not limit the scope of the research. In the present case, however, the theories of punishment that we draw from are well established and well developed, and they provide a firm standard of comparison by which we can view these lay theories of punishment. Given that a reasonable standard of comparison exists, we believe that this is an appropriate basis for validation.

Study 1

In this first experiment, we compared deterrence theory and just deserts theory by varying factors that should affect sentences, depending on which perspective the respondent held. To capture the determinants of punishment, we asked respondents to evaluate harmdoing cases and to assign the severity of punishments that they thought appropriate to the case. We manipulated two factors relevant to just deserts as well as two factors relevant to deterrence and measured the respondents' punitive intent.

Method

Participants. Three hundred thirty-six students from Princeton University completed short surveys for pay or course credit. The average age was 20.1 years; 61% were female.

Procedure and materials. All participants read a short vignette describing an intentionally committed harm, provided a recommended punishment, and completed checks on the manipulation. The basic design was 2 (punishment deservingness factor: low vs. high) \times 2 (deterrence factor: low vs. high).

To generalize the results of this study, we conducted three variations involving different types of offenses. The data for Study 1 are initially aggregated across these three versions of the study (see the Appendix for materials). Each version was procedurally identical, with only the particular instantiation of the independent variables differing. As we discuss in the *Results* section, there were no important differences among the results of the three versions. The overall design was a fully between-subjects 2 \times 2 design nested within the three versions.

In the first version, we manipulated level of punishment deservingness (e.g., the perpetrator's just desert) by adjusting the seriousness of the offense. The low punishment-deservingness case described a perpetrator guilty of embezzling from his employer; the high punishment-deservingness condition described a perpetrator guilty of illegally dumping

toxic waste to increase his profit margin. We manipulated the level of deterrence by adjusting the difficulty of detecting the particular type of crime. In the low deterrence condition, the crime was described as easy to detect (thus requiring less punishment); in the high deterrence case, the crime was described as very difficult to detect (thus requiring more punishment).

In the second version of the study, the deterrence manipulation remained unchanged, whereas the punishment-deservingness variable was instantiated by the presence or absence of morally mitigating circumstances for an otherwise identical crime. In the low punishment-deservingness case, the embezzler redirected profits to the company's underpaid overseas factory workers. In the high punishment-deservingness case, he embezzled to maintain a lavish lifestyle and to pay off gambling debts.

In the third version, the deservingness manipulation remained unchanged from Version 1, whereas we instantiated deterrence by manipulating the publicity that the sentence would receive. As we suggested in the introduction, deterrence theorists should assign high levels of punishment to highly public crimes to promote general deterrence, whereas crimes with little publicity should receive lower penalties. Accordingly, in the low deterrence condition, it was explained that crimes of this sort typically received little or no publicity, whereas in the high deterrence condition, it was stated that there would be wide media coverage and high publicity.

Measures. The first two questions asked participants to provide an appropriate punishment severity. The first was a Likert-type scale anchored with 1 (*not at all severe*) and 7 (*extremely severe*). The second was a 13-point sentencing scale that has been used in a number of justice-research studies (Darley et al., 2000; Robinson & Darley, 1995; Weiner, Graham, & Reyna, 1997). It ranged from *not guilty to life sentence*, with 11 specific punishment durations given in days, months, or years. The two questions were highly correlated across all of our studies (average $r = .76$) and do not differ substantively in any of our analyses. We report statistical results based on the first question both for clarity and because of the difficult psychometric properties of the 13-point scale. We do, however, periodically report answers to the second question to give the reader a sense of the magnitude, expressed in years in prison, of the sentences the respondents were proposing.

Following the primary dependent measures, we asked several questions (again on a 7-point scale anchored with *not at all* and *extremely*) to provide checks on the manipulation and process mechanisms, including, "How serious was this crime?" and "How morally outraged were you by this offense?" In this experiment, we did not perform a check for the deterrence manipulations because of their blatant nature; we feared that it would have appeared nonsensical to the participants to state that this crime was very hard to detect and then ask, moments later, "How difficult was this crime to detect?" We address alternative methods of performing this manipulation check in the *Results* section.

We also included a brief individual-differences measure on sentencing philosophy. The final two questions asked participants to endorse or reject general statements about deterrence theory and just deserts theory on a 7-point scale anchored with *very strongly disagree* and *very strongly agree*. They read, "Some people argue that crimes should get different sentences depending on how likely it is that the criminal will be caught. More specifically, that crimes of similar seriousness should get a longer sentence if it is a hard crime to detect" and "Other people say that the major determinant of the sentence for a crime should be the sentence that the person deserves to receive given the seriousness of the crime he committed."

Results

Preliminary analysis. We first checked that the three versions of the study did not operate differently with respect to the dependent measures. We subjected recommended severity of sentence to a three-way analysis of variance (ANOVA) with deterrence (2),

deservingness (2), and version (3) as independent variables. There was a main effect for version, $F(2, 334) = 43.6, p < .001, \eta^2 = .21$, indicating that the moral mitigation manipulation of Version 2 evoked less punitiveness overall, but it did not interact with deterrence or deservingness. Accordingly, we pooled the data and refer to the aggregate data set in subsequent analyses.

Manipulation checks. The participants perceived the cases as expected. The high punishment-deservingness cases were seen as more serious ($M = 5.4, SD = 1.1$ vs. $M = 3.7, SD = 1.2$), $F(1, 334) = 177.7, p < .001, \eta^2 = .34$, and more morally outrageous ($M = 5.3, SD = 1.5$ vs. $M = 3.2, SD = 1.5$), $F(1, 334) = 182.1, p < .001, \eta^2 = .35$, than the low punishment-deservingness cases.

Punitiveness. There was a large effect for punishment deservingness on recommended punishment, $F(1, 334) = 114.5, p < .001, \eta^2 = .26$. In the low punishment-deservingness condition, the average punishment was 4.1 on a 7-point scale, whereas in the high punishment-deservingness condition the average was 5.4.⁵ On the 13-point punishment scale, participants assigned several months in jail in the first condition and slightly more than a year in the second. There was no main effect for deterrence ($F < 1.0$), and the two-way interaction between the manipulation of deterrence and deservingness was not significant ($F < 1.0$; see Table 2 for means). These results suggest that in recommending sentences, people are highly sensitive to just desert considerations and insensitive to deterrence considerations.

Mediation. A just deserts motivation is presumed to be driven by concerns about the seriousness of the crime and the moral outrage it evokes. We performed a mediational analysis in line with Kenny, Kashy, and Bolger's (1998) recommendation to show that the effects of our deservingness manipulation operated through these psychological mediators.

The first step in this process is to show that the initial variable is correlated with the outcome variable; punishment deservingness was significantly correlated with punishment severity ($\beta = .48, p < .001$). The second step is to show that the initial variable is correlated with the presumed mediators; deservingness was significantly correlated with both perceived seriousness ($\beta = .59, p < .001$) and moral outrage ($\beta = .59, p < .001$). The third step is to show that the mediators predict the outcome variable after controlling for each other and the initial variable; severity of recommended punishment was predicted by both perceived seriousness ($\beta = .27, p < .001$) and moral outrage ($\beta = .57, p < .001$). The fourth step is to show that the direct effect between the independent and dependent variable is reduced after controlling for the effect of the mediator; the direct effect of deservingness on severity of punishment ($\beta = .48$) was reduced to nonsignificance ($\beta = -.01$) when perceived seriousness and moral outrage are controlled, establishing complete mediation.

Individual differences. These results support the prediction that individuals operate primarily from a just deserts motivation when confronted with perpetrators of intentionally done harms. We address next whether individual differences in sentencing

⁵ The results were the same across all three versions of the study: Version 1, $M = 3.7, SD = 0.9$ vs. $M = 5.1, SD = 1.0, t(90) = 7.2, p < .001$; Version 2, $M = 3.7, SD = 1.4$ vs. $M = 4.5, SD = 1.1, t(88) = 3.3, p < .001$; Version 3, $M = 4.6, SD = 1.1$ vs. $M = 6.0, SD = 0.8, t(152) = 9.6, p < .001$.

Table 2
Study 1, Mean Recommended Severity of Punishment by Punishment Deservingness and Deterrence Factors

Deterrence motive	Punishment deservingness	
	Low	High
Low	4.09	5.34
High	4.17	5.46

Note. $N = 336$.

orientations predict sensitivity to the two manipulations. Although there was no overall effect for the deterrence manipulation, one might expect those who most strongly endorse the deterrence philosophy to be somewhat more influenced by these factors.

We performed a median split of respondents on the two sentencing orientation questions⁶ and selected those participants who were above the median on endorsing one stance and rejecting the other. Thirty-five percent ($n = 116$) of our total sample were identified as desertists, 26% ($n = 87$) were identified as deterrists, and the remainder endorsed either both perspectives or neither perspective and were excluded from this analysis. Figure 1 reveals a marginally significant two-way interaction, $F(1, 202) = 3.5$, $p = .06$, $\eta^2 = .02$, with the expected cross-over pattern. The magnitude of this effect is quite small in relation to the size of the main effect for punishment deservingness ($\eta^2 = .26$), and it represents a poor predictor of sentencing. In other words, although individual differences do exist and operate in the expected ways, they do not seem to account for much of the observed variance. This analysis, however, is weakened by the fact that our measure of individual differences is constructed from only two items. Nonetheless, those two items are high on face validity, and a similar measure of individual differences in theories of apology has been shown to have high test-retest reliability (LeBoeuf et al., 2001). The importance of this analysis, perhaps, lies in its ability to provide a check, albeit an indirect one, on the deterrence manipulation rather than in its function as a predictor of punishment.

The interaction described above reveals that those who cared most about deterrence were indeed sensitive to the deterrence manipulation. Although this analysis cannot disentangle the strength of the manipulation from the impact of the manipulation on sentencing, it does provide some evidence that the manipulation was noted by participants, it just was not deemed important by most of them. Our conclusion from this analysis is that individuals do vary in their sentencing orientations and that this variation maps onto recommended sentencing in ways consistent with our hypotheses.

Discussion

Study 1 demonstrates that a manipulation of variables associated with just deserts concerns affects recommended sentence far more than does a manipulation of deterrence-related variables. The marginal two-way interaction between the deterrence manipulation and the self-reported sentencing orientation accounted for very little of the variance in sentencing, although this might well increase with better measures of individual differences. Nonetheless,

it provides some validity to this approach by demonstrating that those who believe most strongly in deterrence theory are also most sensitive to variation in deterrence-relevant factors.

The mediation analysis suggests that moral outrage mediates the impact of the just deserts manipulations on the recommended sentence. Study 2 replicates and extends the first study by presenting a path analysis that looks more closely at the underlying psychological mechanism.

Study 2

The goal of Study 2 was to replicate the first study with stronger manipulations, more complete manipulation checks, and more complete dependent measures, permitting SEM. Additionally, a subset of participants received a new sentencing orientation manipulation in which they were instructed about the deservingness and deterrence perspectives and asked to assign punishments from each orientation. This manipulation followed the initial punishment assignments of the respondents and permits us to make stronger claims about which sentencing perspective (deservingness or deterrence) most closely resembles participants' initial, spontaneously used sentencing perspective.

Method

Participants. Three-hundred twenty-nine students from Princeton University completed the survey for pay. Their average age was 20.4 years; 53% were female.

Procedure. This study was conducted during two different semesters, with slightly different procedures, as detailed below. All participants read one of four scenarios, provided sentencing recommendations, and completed general questions and manipulation checks for the case.

The majority of participants ($n = 223$) completed the general questions first and the sentencing recommendations last. This order was reversed for a subset of participants ($n = 96$) who also received an additional perspective manipulation. After completing their initial sentencing recommendations, these participants received short descriptions of deterrence and just deserts theory and repeated the initial sentencing measures, first for one orientation, then for the other, in counterbalanced order.

Materials and design. As before, two factors were manipulated in a 2×2 between-subjects design, and sentencing perspective added a three-level within-subject factor for some of the participants. To strengthen the scenario manipulations, we simultaneously used instantiations of both deservingness and deterrence from Study 1. Thus, in the high punishment-deservingness conditions, the perpetrator was guilty of toxic dumping (severe offense) and of doing so for personal profit (low moral justification). In the low punishment-deservingness condition, the perpetrator was guilty of embezzling from his company (mild offense) but of doing so for the benefit of underpaid company employees in overseas factories (high moral justification). Similarly, in the high deterrence conditions, the offense was described as extremely difficult to detect and likely to receive high publicity in the press. In the low deterrence condition, the crime was described as easy to detect and likely to receive little publicity.

We achieved the sentencing orientation manipulation by describing the just deserts and deterrence philosophies to participants and then asking them to assign punishments a second and third time from each perspective. This manipulation always came after their initial, spontaneously generated sentencing assignments, and order of presentation was counterbalanced

⁶ Responses on this measure were unaffected by the manipulation of deterrence and punishment deservingness (all F s < 1.0).

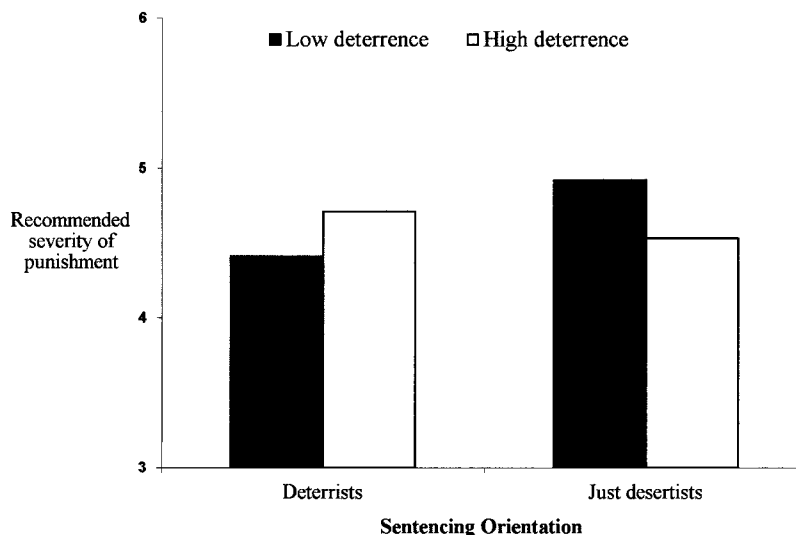


Figure 1. Study 1, mean recommended severity of punishment by deterrence factors and individual sentencing orientation. $N = 203$.

between the two orientations. The following sentencing orientation descriptions were used:

Deservingness. We told participants:

This is sometimes called “the just deserts sentence.” It is the sentence that society assigns as the just punishment that the criminal *deserves* for the wrong that he did. “Wrong” is indexed by both the severity and context of the crime.

Deterrence. We told participants:

A deterrence theorist is concerned with assigning punishment that is sufficient to deter people in general from committing the offense in the future, and having all people widely aware of the punishment for committing that crime. The notion here is to assign an *expected value* of punishment that is constant and too high for a person to risk committing the crime. Thus, if the offense is unlikely to be caught and prosecuted, then the severity of the punishment is increased.

Measures. The measures were generally the same as Study 1, with several additions. We asked whether the perpetrator was guilty of a crime (*yes/no*) and then used two measures of punitiveness: a 12-point sentencing scale ranging from *0 days to life in prison*, and a severity of punishment scale ranging from 1 (*not at all severe*) to 7 (*extremely severe*). All participants answered five questions about the manipulations and presumed psychological mechanisms; some completed these before the sentencing questions, and some answered them after. These questions included, “How serious was this crime?” (1 = *not at all* to 7 = *extremely*), “How likely was it that the perpetrator would be caught?” (1 = *not at all* to 7 = *extremely*), “How much publicity was this case likely to generate?” (1 = *very little* to 7 = *very much*), “To what degree were you morally outraged by this offense?” (1 = *not at all* to 7 = *extremely*), and, finally, “Some criminal acts are committed for reasons that are somewhat morally justified. Others are committed for reasons that are completely morally wrong. For this crime, how morally acceptable were the reasons the perpetrator committed the crime?” (1 = *not moral at all* to 7 = *extremely moral*).

Results

Preliminary analysis. The order in which participants answered the dependent variables (sentencing and mediators) did

not significantly influence any of the dependent variables and did not affect any of the mediated relationships. Similarly, the order of the perspective manipulation was not significant, so we collapsed across these order manipulations and do not report on them further.

Manipulation checks. Participants perceived the cases as expected. The high punishment-deservingness cases were seen as more serious ($M = 5.6, SD = 1.1$ vs. $M = 3.9, SD = 1.4$), $F(1, 327) = 142.1, p < .001, \eta^2 = .30$, and less morally justified ($M = 2.9, SD = 1.1$ vs. $M = 6.5, SD = 1.0$), $F(1, 327) = 649.1, p < .001, \eta^2 = .67$, than the low punishment-deservingness cases. Similarly, the high deterrence cases were seen as more difficult to detect ($M = 5.6, SD = 1.7$ vs. $M = 2.8, SD = 1.4$), $F(1, 327) = 274.9, p < .001, \eta^2 = .46$, and likely to receive more publicity ($M = 5.4, SD = 1.1$ vs. $M = 2.3, SD = 1.1$), $F(1, 327) = 665.4, p < .001, \eta^2 = .67$, than the low deterrence cases.

ANOVA. We begin our results by repeating the analyses of Study 1. A two-way ANOVA on recommended punishment with punishment deservingness and deterrence as independent variables generated the same results. The two-way interaction was not significant, $F(1, 321) = 0.8, p = .37$, nor was the main effect for deterrence ($F < 1.0$). Once again, there was a large and highly significant main effect for the deservingness manipulation ($M = 2.9, SD = 1.4$ vs. $M = 5.0, SD = 1.1$), $F(1, 321) = 200.3, p < .001, \eta^2 = .39$, suggesting that people base their sentencing recommendation largely on their sense of just deserts. In sentencing terms, the less serious crime was given 3–4 weeks of jail time, and the more serious offense was given a year.

SEM. In addition to replicating the previous findings, the primary purpose of this study was to construct a path model to describe this process. Figure 2 represents the theoretical model we began with and includes the unique relationships between the variables on the basis of SEM. The model flows from left to right, with the independent variables on the left, the dependent variable on the right, and the mediators in between. The resultant model produces estimates of each relationship after we partialled out

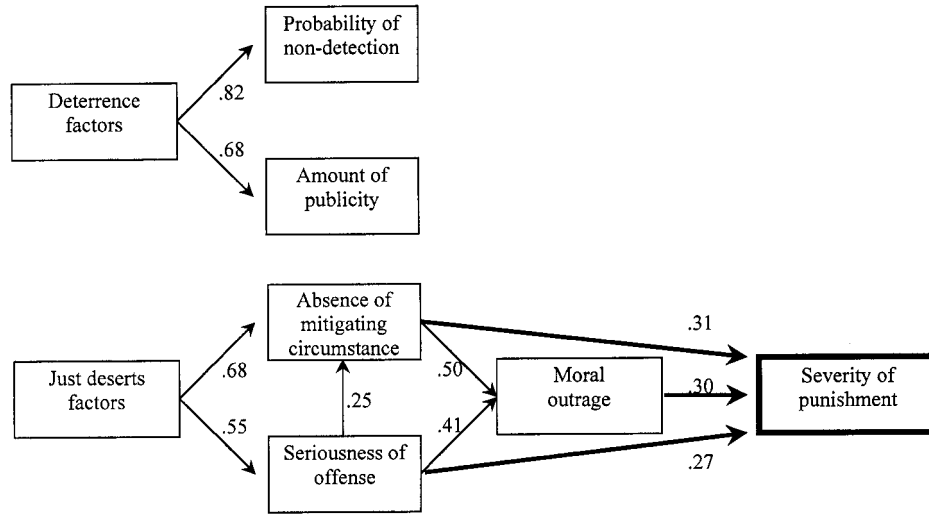


Figure 2. Study 2, path model of predictors of punishment severity. Root-mean-square error of approximation = .065, $N = 329$.

shared variance, and it calculates the overall fit of the model. We tested this causal model using RAMONA, a covariate structure modeling statistical program available within the SYSTAT statistical software package (SPSS Science, 1996). The fit statistic is the root-mean-square error of approximation (RMSEA), and by convention a value lower than .10 is considered a good fit, and a value lower than .15 is considered marginal (Browne & Cudeck, 1992). The RMSEA for this model is .065, indicating that it provides a good fit for the data.

We first note that our manipulations worked as expected. Each manipulation had strong, direct effects on the manipulation check, and their effects on downstream variables were fully mediated through these variables.⁷ The manipulation of just deserts factors is equivalent in strength to our manipulation of deterrence factors (.68 and .55 vs. .82 and .68), which indicates that our asymmetrical results (just deserts over deterrence) are not an artifact of manipulation strength.

Looking next at the dependent variable, we note that there are three unique predictors of punishment severity: the perceived seriousness of the offense ($\beta = .27$), the lack of mitigating circumstances ($\beta = .31$), and the moral outrage evoked by the action ($\beta = .30$). These three variables account for much of the variance observed in the dependent variable, and there is no effect whatsoever from the deterrence manipulation or any of the variables that would be expected to be relevant to a deterrence perspective. Indeed, when we force the model through deterrence, the fit decreases dramatically and does not approach significance.

Finally, the perceived seriousness of the offense predicted the absence of mitigating circumstances ($\beta = .25$). This relationship stems from the fact that the two just deserts factors were not orthogonal to each other. In summary, the model illustrates that the manipulations were thoroughly effective but that the deterrence factors had no impact on sentencing. The just deserts factors had a strong impact on sentencing, and these effects were partially mediated through moral outrage.⁸

Perspective manipulation. After indicating what they deemed to be an appropriate punishment for the offense, 96 of the partic-

ipants were asked to assign punishments a second and third time from each of the two sentencing perspectives. When they were asked to think like a deterrist (and given explicit instructions on what this means), the response of participants was to ratchet up the punishment, regardless of the circumstances ($M_{deter} = 4.8$). When they were using a philosophy based on deservingness, their punishments did not deviate from their original sentence ($M_{default} = 3.8$, $M_{deserve} = 3.7$). Follow-up tests revealed that the level of punishment assigned in the deterrence-perspective condition was significantly higher than that in both the default condition, $F(1, 95) = 41.8$, $p < .001$, and the deservingness-perspective condition, $F(1, 95) = 72.2$, $p < .001$. This provides further evidence that people's default response for these crimes was more of a just deserts response than a deterrence response.

Discussion

The results of Study 2 provide a deeper understanding of the process by which ordinary people assign punishment. First, the findings from Study 1 were fully replicated: In sentencing perpetrators of intentionally done harms, people respond to factors associated with the just deserts theory and ignore those associated with deterrence. Further, we get a more detailed picture of the psychological process that underlies this finding.

⁷ We tested models that included all of the direct effects, but the model fit was not improved and the individual pathways were not significant. Mediation was further established with the use of the Sobel test (Kenny et al., 1998). The direct effect from the just deserts manipulation to severity of punishment was significantly reduced when either absence of mitigating circumstance (Sobel test statistic = 7.68, $p < .001$) or seriousness of offense (Sobel test statistic = 7.98, $p < .001$) was controlled.

⁸ A mediational analysis on this part of the model reveals that the direct effect of seriousness of offense on severity of punishment dropped from .71 to .36 when moral outrage was controlled (Sobel test statistic = 7.79, $p < .001$). Likewise, the direct effect of absence of mitigating circumstance on severity of punishment dropped from .68 to .32 when moral outrage was controlled (Sobel test statistic = 8.54, $p < .001$).

The model illustrates how the manipulations affect the perceived degree of moral mitigation for the offense and the perceived seriousness of the offense. These two perceptions determine a person's moral outrage, and a combination of these three factors determines a person's punitive intent. In our first study, moral outrage wholly mediated the effect of prior variables on sentences; in the present study, moral outrage provides partial mediation, but both the perceived degree of moral mitigation and the perceived seriousness remain independent contributors to the sentencing severity measure.

The top half of the model shows the effect of the deterrence factors. The manipulation checks reassure us that the participants were alert enough to catch the differences between the cases, but this information had no importance to them when they were deciding on the appropriate sentence. The probability of detection and the degree of publicity of the crime were wholly unrelated to sentencing. For a deterrence theorist, this would be discomfiting information.

The results of the perspective manipulation are important. None of our participants reported difficulty with the instructions, and, when asked to respond like a deterrist, they were able to proceed with no apparent trouble. However, their response was to ratchet up the punishment regardless of our manipulation. Deterrence theory, to them, seems to be synonymous with a simple, general increase in punitiveness. What this might suggest is that when individuals vote for legislation designed to deter crime, what they are actually doing is expressing their desire to increase the punitiveness of the criminal justice system. In effect, they are expressing their strong desire to punish the perpetrators of crime—a desire whose primary purpose may be as much to give the perpetrator what he or she deserves as to reduce the likelihood of future crime (von Hirsch, 1998). Some of these possibilities are addressed more fully in the next study and the General Discussion.

Study 3

Many authors (D. A. Anderson, in press; Dana, 2001; Ehrlich, 1975; Fagan & Meares, 2000; Tyler & Boeckmann, 1997) have commented on what strikes them as the rapid profusion of laws that take a deterrist or incapacitationist view. Similarly, most of our participants expressed support for deterrence-oriented penal systems, and other research in the area (Weiner et al., 1997) has found that people operate from both retributive and utilitarian stances, depending on the particular attribution they make regarding the perpetrator. This creates a puzzle: Our just deserts results do not seem consistent with society's expressed desire to curb future crime by increasing penalties. Study 3 begins to address these inconsistencies and attempts to reconcile the seeming disjunction between these observations and our results.

We see two possible reasons for this disjunction. First, people may be unable to adequately express their deterrist goals through a penal system calibrated by length of time in prison. If, in the mind of the respondent, our punitive scales are only appropriate for extracting retribution, then it would be no surprise that we only found support for the just deserts motive. As one reviewer put it, "deterrence considerations may focus on getting caught versus not getting caught."

Alternatively, it could be that people endorse the goal of deterrence but are not inclined to apply the perspective when faced with

the question of what to do with a single individual who has already committed a crime. Although they may support deterrence at some societal level, when it comes to actually sentencing specific offenders who have committed specific offenses, they are cued toward the intuitive tenets of just deserts.

Study 3 addresses these two possibilities by providing participants an unambiguous opportunity to express desires to deter future crime or to catch and punish the perpetrator. These explicit measures of motive are then compared with the implicit measures used in the previous studies under varying conditions of deservingness and deterrence. Thus, in Study 3 we provide a conceptual replication of the previous studies but do so using both explicit self-reports and the more implicit behavioral measures of motive. In doing so, we seek to discover the limits of the just deserts results of these particular studies.

Method

Participants. Three-hundred fifty-one students from Princeton University completed the survey in two mass-testing settings. Their average age was 20 years; 56% were female.

Procedure. The procedure was similar to Studies 1 and 2. Participants read one of four scenarios, recommended sentences, and provided manipulation checks as before. Prior to these questions, however, there were two new questions that involved allocating hypothetical resources to catch and prosecute the perpetrator or to deter future instances of the crime.

Materials and design. As before, we manipulated deservingness and deterrence in a 2×2 between-subjects design. We described a case of international embezzlement in which the funds were being funneled either to underpaid overseas factory workers (low punishment deservingness) or into an offshore gambling account for personal gain (high punishment deservingness). Crossed with this factor was the deterrence manipulation, in which the crime was described as easy to detect (low deterrence) or difficult to detect (high deterrence). The case was described as an ongoing situation in which the crime had been detected but the specific perpetrator had not. After responding to the initial allocation questions (see below), participants were informed that the perpetrator had subsequently been apprehended. Finally, the gender of this perpetrator was varied across conditions, resulting in a three-way design with eight cells.

Measures. After the first part of the scenario, we provided respondents with an opportunity to express whether they were most interested in punishing the perpetrator or in preventing future crimes of a similar nature. We explained that companies often have two types of responses when they suspect a crime of this sort: pursuit and prosecution of the perpetrator, and prevention of similar crimes in the future. The questions used 7-point scales and asked whether the company should expend the *minimal*, *normal*, or *maximal* available resources for catching the perpetrator (a dimension consistent with a just deserts motivation) and again for preventing future occurrences of the crime (a dimension consistent with a deterrence motivation).

At the conclusion of the full scenario, we asked the two punishment questions and the manipulation checks from Study 2 as well as a revised version of the sentencing orientation question. This revision included an explicit description of the factors relevant to the two sentencing perspectives and asked respondents the degree to which they endorsed each perspective. The questions asked, "How strongly do you *personally* support the deservingness philosophy?" and "How strongly do you *personally* support the deterrence philosophy?" Responses were measured on a Likert-type scale ranging from 1 (*not at all*) to 7 (*extremely*).

Results

Manipulation checks. As in the previous studies, our manipulations were effective. The high punishment-deservingness sce-

narios were perceived as more serious ($M = 4.5$, $SD = 1.0$ vs. $M = 3.7$, $SD = 1.4$), $F(1, 349) = 34.9$, $p < .001$, $\eta^2 = .09$, and less morally justified ($M = 4.7$, $SD = 1.7$ vs. $M = 2.1$, $SD = 1.2$), $F(1, 349) = 280.0$, $p < .001$, $\eta^2 = .45$, than the low punishment-deservingness scenarios. Similarly, perpetrators in the high deterrence conditions were perceived as less likely to be caught ($M = 3.1$, $SD = 1.3$ vs. $M = 5.0$, $SD = 1.5$), $F(1, 349) = 148.8$, $p < .001$, $\eta^2 = .30$, than were those in the low deterrence conditions. Deservingness and deterrence did not interact with each other on any of the measures.

Sentencing orientation. We begin the substantive analyses by examining how people described themselves on the sentencing orientation question. As expected, these two general questions were not affected by the manipulations (both $F_s < 1.0$), so we report only the grand means. When asked about just deserts and deterrence, participants generally supported both perspectives. Both were rated significantly above the midpoint ($M = 5.4$ and 4.7 , respectively), with a small but significant preference for deservingness over deterrence, $t(348) = 6.2$, $p < .001$. It is worth noting that there was only a small, negative, and marginally significant correlation between the endorsements of these two philosophies, $r(349) = -.09$, $p = .09$. People seemed to support these two philosophies and generally to have a positive attitude toward both; they did not display much of a tendency to favor one at the expense of the other when the measures did not force such a distinction.

Resource allocation. The grand mean for each allocation question is reported first; we break it down by condition in the subsequent section. On average, people allocated *normal* amounts of resources toward catching the perpetrator. The mean for this question was 4.2; the scale midpoint was 4.0.

Respondents were generally more favorable toward preventing future crimes of this sort, as shown by an average allocation of 5.5. This mean is significantly higher than the midpoint of *normal*, $t(350) = 20.4$, $p < .001$, and is significantly higher than the amount allocated to catch the perpetrator, $t(350) = 13.5$, $p < .001$, indicating that people in this instance placed an explicitly higher value on crime prevention and deterrence.

Each of the means given above represents a grand mean collapsed across both manipulations. We next look at how these means varied across the four cells (see Table 3). If people truly

value deterrence and deservingness, as indicated above, then they should increase their allocations toward prevention when the detection rates are low and should increase their deserts allocation (albeit somewhat less) when the punishment-deservingness factors are high. In other words, if participants are internally consistent, then we expect two main effects: One for the just deserts manipulation on the "catch the perpetrator" allocation, and one for the deterrence manipulation for the "prevent future crimes" allocation.

Catch the perpetrator. In line with this prediction, there was a strong main effect for punishment deservingness such that more resources were allocated toward catching the perpetrator when the case was high in punishment deservingness ($M = 4.7$, $SD = 1.3$ vs. $M = 3.7$, $SD = 1.6$), $F(1, 347) = 40.5$, $p < .001$, $\eta^2 = .11$. However, when the scenario described the crime as difficult to detect (high deterrence motivation), participants actually allocated even fewer resources toward capturing the perpetrator, $F(1, 347) = 12.9$, $p < .001$, $\eta^2 = .04$, suggesting perhaps that participants treated the two allocation questions as linked to each other (e.g., trading off one for the other).

Prevent future occurrences. Participants continued to allocate relatively high amounts to this utilitarian goal ($M = 5.5$) but ignored the deterrence theory-relevant manipulations that should affect this allocation. Once again, however, participants revealed a concern for the just deserts factor by allocating additional funds to prevent future occurrences of the crime when it was conducted for immoral purposes, $F(1, 347) = 5.8$, $p = .02$, $\eta^2 = .02$.

Overall, participants explicitly allocated more resources to the utilitarian goal of preventing future crime. However, these allocations varied systematically only in response to manipulations of the moral gravity of the offense and not in response to any manipulation of the deterrence factor. Participants were clearly interested in reducing the likelihood of future crime, but the ebb and flow of this desire was controlled by variables irrelevant to the principles of any coherent theory of utility.

Sentence recommendation. There was a strong main effect for the punishment-deservingness manipulation on the recommended sentence ($M = 5.3$, $SD = 1.9$ vs. $M = 6.7$, $SD = 1.4$), $F(1, 347) = 63.7$, $p < .001$, $\eta^2 = .15$, but, again, no effect for deterrence. This replicates both of the previous two studies.

Perpetrator gender. The majority of the participants learned that a woman committed the crime, but this knowledge seemed not to affect punitive intent or relative sensitivity to the other manipulations. The main effect and interactions for perpetrator gender were not significant for the sentence recommendations or for any of the manipulation checks.

Individual differences. We performed a median split on sentencing orientation, as in Study 1, and generated two groups of relatively pure desertists and deterrists. Twenty-four percent ($n = 85$) of our total sample were identified as the former, and 29% ($n = 102$) were identified as the latter.⁹ As in the first study, we predicted that self-reported deterrists would increase punishment when the deterrence factors were high and decrease punishment when the deterrence factors were low. Likewise, desertists would

Table 3
Study 3, Mean Responses by Question, Punishment Deservingness, and Deterrence Factors

Deterrence motive	Punishment deservingness	
	Low	High
Catch the perpetrator		
Low	4.09	4.93
High	3.40	4.52
Prevent future occurrences		
Low	5.43	5.73
High	5.24	5.66
Recommended sentence		
Low	5.42	6.70
High	5.17	6.78

Note. $N = 351$.

⁹A separate analysis on the full sample, using a median split on participant response to the just deserts question, yielded results that were substantially stronger than (and directionally identical to) those presented here. For consistency, though, we use the same division as in Study 1.

increase punishment when the deservingness factors were high and decrease punishment when the deservingness factors were low. In line with this prediction, there was a significant three-way interaction on recommended severity of punishment among the deterrence and deservingness manipulation and the dichotomized sentencing orientation measure, $F(1, 179) = 4.9, p = .03$. This interaction was driven by a pair of marginal two-way interactions between deterrence and sentencing orientation, $F(1, 179) = 2.6, p = .10$, and between deservingness and the sentencing orientation measure, $F(1, 179) = 3.5, p = .06$. Both of these marginal interactions revealed the expected outcomes—deterrists were more sensitive to deterrence manipulations, and just desertists were more sensitive to deservingness manipulations. As before (and with similar caveats regarding two-item measures), this result contributes to the face validity of the measures and procedures while also suggesting that individual differences among participants do not adequately explain the present patterning of results.

Discussion

These data provide a more complex view of people's motivations for punishment. The first thing to note is the general support expressed for both deterrence and deservingness. These two philosophies are not perceived to be incompatible with one another, as indicated by the small negative correlation between philosophy endorsements and the relatively high average endorsements. This is another demonstration of the finding we noted in the introduction, that people generally endorse all justifications for punishment and do not regard themselves as having to choose between them. Yet although people endorsed the deterrence justification for punishment, their application of it to a specific case was remarkably low. When dealing with a case of a single individual who has committed a crime, participants appeared insensitive to the factors that should drive sentencing when utilitarian goals are the motivating force; it was the factors relevant to the just deserts perspective that determined sentencing. Thus, although people value deterrence and deservingness almost equally as motives, they seem to sentence at the individual level from a strictly deservingness-based stance.¹⁰

This finding sheds some understanding on the previously mentioned disjunction between the current results and those obtained by Weiner et al. (1997). When participants in this study were asked to identify explicitly the philosophical stance that best describes their personal orientation, we obtained a wide range of support for just deserts and deterrence. Similarly, when participants were asked to state whether they thought the companies should pursue deterrent or retributive goals, we again obtained a mix of motives. In short, people expressed support for both positions. Weiner et al. (1997) also found that people did not adhere to a single stance but rather used both according to an internal attributional analysis. Both sets of research, then, find that people understand these theories and apply them in different contexts. The difference is that the present research goes beyond explicit self-reports and also gathers measures of punitive intent. It is these measures, we argue, that provide the clearer picture of the true motivation that underlies punishment. The disjunction lies not between the present results and those of other researchers but rather between what people say and what people do when it comes to assigning punishment.

General Discussion

This article reports three empirical studies that converge on the following conclusion: When faced with a prototypical wrongdoing action, a harm intentionally inflicted on another by a perpetrator, people assign punishment to give the perpetrator his or her just deserts rather than to achieve any future utility. Although participants expressed support for deterrence as a goal of punishment at an abstract level, they failed to assign punishment in a way that was consistent with this stated goal; they did not alter the level of punishment assigned to a perpetrator as a function of alterations in cases that should have made a difference had they been using a deterrence perspective. Their punishment assignments were instead consistent with a theory of punishment based on the moral deservingness of the perpetrator.

We consider these results further, but first we should consider some limits on their generalizability. Our results were obtained from a college population and may be somehow specific to that population. We agree that the universality of these findings should be tested on other populations (particularly across different cultures), but because our sample is highly educated it is probably the case that this sample is more likely than other, more broadly representative samples to behave in line with deterrence principles. Our sample is also limited in its demographic representativeness, but prior research suggests that demographic variables are not strongly linked to attitudes about just punishments (Hamilton & Rytina, 1980; Rossi, Berk, & Campbell, 1997; Rossi et al., 1974). Obviously, too, scenario studies have their limits. However, we believe that for revealing sentencing perspectives, this research method is a useful one. We think that our scenarios—designed to highlight particular facets of a case—focused attention on relevant issues and avoided the complex detail that real accounts of crimes provide and that lead to many uncontrolled inferences. Having said all this, however, we certainly do not deny the importance of future research that addresses these questions using a more diverse set of

¹⁰ We have run another study, for somewhat different purposes, that generated a further test of deterrence theory. As part of this study we asked a different sample of 138 students to read the standard toxic-dumping case and to assign a punishment to it. Next we provided two pieces of information: that the harm produced by the action was either the same as or greater than that when the laws were written 10 years previously (a just deserts manipulation), and that the frequency of this type of crime was either stable or increasing over this period (a deterrence manipulation). The order in which this information was presented was varied, but all respondents eventually got both pieces of information and were asked whether they would increase their assigned punishment. Given our previous findings, our first prediction was the just deserts one, that increased harm would elicit increased punishment. Given the clarity of its manipulation, we also expected that increased crime frequency would finally elicit increased punishment. To our surprise, we found support only for our first prediction. Twenty-one percent more of the participants increased their punishment when the action generated more harm than it had in the past (Mann-Whitney U test, $z = -2.59, p < .01$), whereas only 5% more of the participants increased their assigned punishment when informed that the frequency of the crime was on the increase (Mann-Whitney U test, $z = -0.54, ns$). It seems that even when deterrence manipulations are strong, clear, and, to us at least, obvious, participants fail to respond in ways that are consistent with deterrence theory.

research methods and samples from alternative populations of respondents.

A Possible Macro–Micro Level Distinction

We turn now to the interpretations of our research. On the basis of these findings, one might conclude that deterrence considerations have no place in individuals' juridical reasoning. By this we mean that although our respondents endorsed deterrence goals, they generally failed to react to those factors that should alter the penalties assigned if one were using a deterrence perspective to generate sentences. Also, in Study 2 their understanding of deterrence theory was restricted to a simplistic notion of "deterrence requires more punishment." Other studies have come to a similar conclusion: Finkel et al. (1996) pointed out that in assigning a sentence to a specific case, respondents seek a punishment that is proportionate to the morally relevant details of the case, a just deserts result similar to ours. However, we do not think it is appropriate to conclude that people never apply a deterrence perspective to punishment assignments or are unsophisticated because they fail to apply the deterrence philosophy that they claim to hold to specific cases. What we suggest (but have not demonstrated) is that different perspectives on sentencing can be induced and may lead to the use of the different punishment philosophies. When people consider what sentences are appropriate for a type of crime in general, they are cued to a macro, or societal, level of consideration (Brickman, Folger, Goode, & Schul, 1981). If they are told that, for instance, insider trading is an offense that is very hard to detect and that the crime is frequent and on the increase, then it seems to them truistic that this crime must be punished more severely. A deterrence perspective is invited and is likely to be mobilized when one asks the question at this macro level. At this general crime control level, people may be intuitive deterrence theorists, and they may also be intuitive incapacitacionists; if they are asked about how criminals who are highly likely to recidivate ought to be treated, they may agree that these criminals should be locked away forever. However, when they are considering what sentence is appropriate to give to a specific perpetrator who has committed a specific crime under a specific set of circumstances, the micro level just deserts perspective is mobilized. Even if participants learn that the frequency of the crime is on the increase, they do not take this as license to increase the punishment for this individual for the crime he or she has committed, because they are using a just deserts perspective. Do they perhaps have a sense that this would be somehow unfair because it would be an after-the-fact change in the rules? Future research will tell.

Deterrence Theory

Clearly, we are inclined to an interpretation of our results as revealing that people hold a just deserts theory of punishment when their task is to punish specific wrong doers. But we might rescue a deterrence interpretation if we modified deterrence theory. That is, it might seem to the reader that deterrence theory could be salvaged if it included a term that increased the punishment for the more serious crimes in order that society be better protected from those particularly damaging and heinous crimes. If we were to read deterrence theory that way, then the finding that crime seriousness increased assigned punishment length could be taken as a predic-

tion of both just deserts and deterrence theory, and, thus, our experiments are really not a critical test between the two, and deterrence theory is accordingly not damaged by our results.

There are two problems with this new formulation of what we might call amended deterrence theory. First, it is more than an amendment; it is an alteration of the basic theory in a way that runs counter to the underlying utilitarian philosophy. For a theory that stays close to the original Benthamite utilitarianism, punishments are assigned solely for the purpose of deterring the wrong doer and people in general from committing the offense. So if murder is rare in a culture, it need not be highly punished, whereas if some other crime is frequent and on the increase, the utilitarian increases its punishment until its frequency begins to drop. Offense seriousness is not in the equation.

Second, recall Study 3 and the middle version of Study 1. In those particular versions, we did not vary the seriousness of the offense; we held it constant at embezzlement. What we did vary was the moral mitigation for the offense. When there was a moral mitigation, respondents' moral outrage at the scenario was less and the magnitude of assigned punishment was also lower. To stretch deterrence theory to include effects caused by moral outrage seems to us to convert it to a theory that is salvaged only by converting it to a just deserts theory.

Just Deserts Theory

The current research begins to provide the outlines of the naive theory of punishment assigned to individual perpetrators, which is built around a just deserts orientation in generating punishments. Thus, it is time to be clearer on just what sort of theory of just deserts we suggest that our respondents hold. We do so not because we think that we have definitively demonstrated that people do hold this conceptualization but because a clearly specified account of the theory may facilitate further research, including research that disproves the theory.

Recently, a number of writers have outlined the core of just deserts thinking and suggested that it is consistent with what we can observe of everyday, everyperson, moral thinking (Finkel, 1997; Goldberg, Lerner, & Tetlock, 1999; Morris, 1968; Strawson, 1974; von Hirsch, 1998). Briefly, punishing for an offense is a way of censuring or blaming the person who committed that offense. Intentional harms call forth sanctions such as prison terms or, in another era, the infliction of physical pain.

What we suggest is that there is a prototype of an intentional wrong, purposefully committed. Faced with a description of an offense that triggers that prototype, the observer experiences some degree of moral outrage, is able to assign a degree of blame for that act, and then generates a punishment commensurate with the blame. Because penalty assignment is a blaming activity, it is important that the degree of blame and censure be proportionate to the degree of blameworthiness of the offender, and this blameworthiness is generally indexed by the moral severity of the harm that the offender committed. This is normally closely correlated with the degree of harm that the offense causes. What this suggests is that a culturally conversant individual has an idea of a hierarchy of offenses, ordered by their normal blameworthiness, and has a coupled ascending scale of the corresponding penalties to attach to each offense.

The magnitude of these punishments and the sense of offense seriousness are both labile, in the sense that they can be rapidly modified by the holder on the basis of many kinds of information. If Mary is suddenly convinced that a specific prison is a country club in which offenders serve comfortable time, then she will increase sentences for all offenders who will be sent to that prison. If she becomes convinced that some offense she previously thought minor really inflicted much more harm than she thought and that its perpetrator was significantly more blameworthy, then she will elevate that offense in her hierarchy of seriousness and correspondingly increase the severity of punishment she assigns to it. The ordinary person is persuadable on these sorts of issues but arranges what he or she is persuaded about to maintain the general notion that punishment must be proportional to the blameworthiness of the offense. This notion of *moral proportionality*, we suggest, is the core of the just deserts perspective. We think we have demonstrated that when people are considering the punishment that should be assigned to an individual wrong doer, this just deserts perspective is the one they generally use.

Moral proportionality of the punishment to the magnitude of the crime does not imply an eye-for-an-eye equivalence of punishment to crime. It is often assumed that what we tactfully have been calling a just deserts punishment stance is in fact a barbaric retributionist, *lex talionis* stance that demands the death or torture of the offender in appropriate cases. (But note Peter French's, 2001, remark that "why [retribution] is barbaric or why being barbaric is a sufficient reason to dismiss it, however, is seldom explained"; p. 207.) However, a theory of proportional retribution does not demand, for instance, the death penalty for murders; it only treats murder as the most serious crime, demanding the maximal penalty one would assign. There is no contradiction between holding a retributionist stance and being opposed to the death penalty.

Further, we suggest that society as well as the victim requires the just deserts punishment. Unless the punishment is imposed, a real feeling of incompleteness lingers, and there is a sense that justice has not been done. These feelings of incompleteness and sense of failed justice are held by those who witness or become aware of the original offense as well as by its victim. From this perspective, a just society is one that assigns just deserts punishments proportionate to the moral blameworthiness of the offense, and it must not fail to punish wrongdoing in these ways.

Implications for Public Policy

Although our major interest in this research lies in its psychological implications, we also think that it has some criminal justice and institutional policy implications, and we risk diluting our psychological message by briefly mentioning them. In the introduction we suggested that if those who create and carry out the law operate from a primarily utilitarian orientation but the general populace operates from a deservingness orientation, then the two are destined for conflict. Suppose that a good deal of further research confirms that the general populace does in fact operate from a just deserts orientation when assigning punishment to specific cases. We suggest that, to the extent that courts violate this sentencing policy, the law loses its moral credibility in the eyes of the citizens. If (as we have argued at length in Robinson & Darley, 1997) the individual's experience with the law has been that it

rarely coincides with his or her personal moral intuitions, then the legal code is unlikely to possess the moral authority to guide an individual's behavior. As a result, people are less likely to use the law as a guidepost to appropriate behavior (at least when they are not under police surveillance). For a society that depends on voluntary compliance with the law, such considerations cannot be ignored. Indeed, if the goal is to reduce future crime, then the most effective means to this end may entail, ironically, a rejection of the utilitarian basis of punishment in favor of a just deserts system that aligns with people's everyday sense of justice.

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Appendix

Stimulus Materials From Study 1

Version A

Background and Punishment-Deservingness Manipulation

James started out as a clerk in a middle sized independently owned store near where he lived. As time went by, the owners gave him more responsibility, including some for accounting for money. He spent quite a lot of money on going out to bars at night and placing bets on football games. Once when he ran low on money, he “skimmed” some money from the business to spend on his nightlife. He then kept doing this over a period of months. Over an eight-month period he stole \$5,600 from the store until he was caught and found guilty.

Ralph owned a chain of dry cleaning plants. Some of the chemicals used in those plants are quite toxic. A set of recently done studies have found that they increase the risks of liver and pancreatic cancer—these are rarely occurring cancers, but any contact with the chemicals doubles the risk of an individual getting cancer. Ralph has a truck in which he collects all of the used chemicals from his plants. There is a toxic waste processing plant that can treat the used chemicals, greatly reducing their danger. The costs of disposing of the chemical that has recently been found dangerous, naturally is quite high, given the complexity of the treatment required. Ralph makes enough money from his chain to live well, but rather than cut into his profits, about every third time he collects the chemicals, he instead illegally dumps the toxic chemical into fields on the edge of town, even though he is aware that it is likely to seep into wells that are used for drinking water. He is eventually caught and found guilty of the offense.

Deterrence Manipulation

Given the way that this store did its accounting and bookkeeping, this sort of theft was very easy to detect, and a routine audit meant that he was caught at it.

Given the way that the store did its bookkeeping and accounting, it was almost impossible to detect that this was happening. Through a series of coincidences, he was caught at it in this case.

Version B

Background

John was a corporate executive who worked in a section of his international corporation that dealt with currency conversion. The section was responsible for converting local currencies to US dollars to be returned as profits to the company headquarters. The system worked by tracking what are called “bands” of conversions ratios on a daily basis for each conversion, and making the conversions at a rate somewhere within those bands. John needed money, and he arranged to cheat on the system to get it. He made the conversions at a slightly below-average level in the daily band. He did this to create small surpluses of money that he then kept. This occurred before the profits were entered on the corporate books.

Punishment-Deservingness Manipulation

The reason he needed money was for people who worked in the corporation factories overseas. Many of them were paid a below cost of living wage, and he arranged that a friend of his in two factories received the profits from his surpluses to give to those most in need among the workers.

The reason he needed money was for debts he had run up with loan sharks. He had a habit of betting on football games and had started to run losses. To keep betting he borrowed from these loan sharks, while continuing to maintain his extravagant style of living.

Deterrence Manipulation

A crime of this sort is almost impossible to detect. It is done before the currencies are entered into the corporate books, and the conversion rates are within the daily exchange bands. In this instance it was detected only by a set of very unlikely coincidences.

Unknown to John, a crime of this sort is eventually easy to detect. It shows up as a continuing series of slightly below average currency conversions. So it was detected by the corporate accounting group after being in operation for 11 months.

Version C

Background and Punishment-Deservingness Manipulation

James started out as a clerk in a middle sized independently owned store near where he lived. As time went by, the owners gave him more responsibility, including some for accounting for money. He spent quite a lot of money on going out to bars at night and placing bets on football games. Once when he ran low on money, he “skimmed” some money from the business to spend on his nightlife. He then kept doing this over a period of months. Over an eight-month period he stole \$5,600 from the store until he was caught and found guilty.

Ralph owned a chain of dry cleaning plants. Some of the chemicals used in those plants are quite toxic. A set of recently done studies have found that they increase the risks of liver and pancreatic cancer—these are rarely occurring cancers, but any contact with the chemicals doubles the risk of an individual getting cancer. Ralph has a truck in which he collects all of the used chemicals from his plants. There is a toxic waste processing plant that can treat the used chemicals, greatly reducing their danger. The costs of disposing of the chemical that has recently been found dangerous, naturally is quite high, given the complexity of the treatment required. Ralph makes enough money from his chain to live well, but rather than cut into his profits, about every third time he collects the chemicals, he instead illegally dumps the toxic chemical into fields on the edge of town, even though he is aware that it is likely to seep into wells that are used for drinking water. He is eventually caught and found guilty of the offense.

Deterrence Manipulation

In this case, the sentence you assign will get wide publicity because the major newspaper of the state is doing an intensive series on crimes, criminals, and courts. They select every 50th case, essentially at random, for a quite detailed feature story write up. By doing this, they give the readers a sense of the realities of the crimes and criminal court system in their state. The series has attracted wide readership.

In this case, the sentence you assign will get almost no publicity. Newspapers in this state don't routinely publish sentencing reports.

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