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Does Wrongful Conviction Lower Deterrence?

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Abstract

The traditional answer is positive, based on the idea that wrongful conviction lowers a potential offender's incentive to remain innocent. The present paper argues that there is no such effect for legal error concerning the identity of the offender, as one may be convicted of a crime committed by someone else, whether or not one chooses to remain innocent. It follows that there is generally no effect on deterrence for acts like murder, assault and robbery, since for acts that are known to have been committed, wrongful conviction involves mistaken identity.

Convicting the wrong person may have indirect effects on deterrence, but it will be argued that such effects are likely to play a significant role only under special circumstances.

One implication of the main point is that society's aversion to sanctioning the innocent cannot be derived solely from a concern for deterrence.

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1. Introduction

According to a traditional view, the value of accuracy in determining whether a defendant has committed a criminal offense stems in part from its effect on deterrence. Posner (1999, p. 1484) formulates this view as follows:

‘To see how accuracy in fact-finding relates to deterrence, notice that the expected cost of punishment ... is actually the difference between the expected cost of punishment if one commits a crime... and the expected cost of punishment if one does not commit a crime... The more accurate the process of determining guilt is, the less random punishment will be, and so the greater will be the law's deterrent effect. To put this point differently, greater accuracy in the determination of guilt increases the returns to being innocent.

The point is not limited to criminal law. It applies to all areas of law in which deterrence of unlawful behavior is an important objective. It shows what a good investment, expenditures on evidence can be’.

This traditional view may be correct, when the issue before the court concerns the nature of the acts committed by the defendant (as in a tax audit), but not when the issue concerns the identity of the offender. Essentially, committing a crime does not lower the risk of being convicted of someone else's crime, and so this risk does not provide an incentive to commit a crime. This point is especially relevant for crimes such as e.g. murder, assault and robbery, as the commission of such acts is usually obvious from the harm created. When the existence and nature of a crime is not in doubt, the only possible error is mistake of identity², which, as just argued, does not lower deterrence.

A simple example can be used to illustrate the general argument that wrongful conviction does not lower deterrence for acts that create unmistakable harm: Consider the situation where A considers murdering some other person, B. If A abstains, he or she will not risk conviction of the murder of B, since B will (generally) still be alive. A may risk being wrongfully convicted of a murder committed by someone else, but this risk exists independently of A's own act³, and so does not affect A's incentive to abstain from the murder of B.

In the remainder of this article, the main point is elaborated, and it is analyzed whether wrongful conviction may affect deterrence in ways other than those suggested by the traditional view. Finally, the main arguments are summarized, and some of the main implications of the analysis are pointed out.

2. When Does Wrongful Conviction Lower Deterrence?

² For the crimes mentioned error may concern the nature of the act, as when the degree of the offender's violence is unclear. This kind of error can affect incentives, since a potential offender will have less incentive not to use a high degree of violence, when a lower degree may be mistaken for a higher.

³ It may even increase the risk to the extent that the court is more likely to falsely convict a person with a prior criminal record.

The point that deterrence may be affected by legal error concerning the existence and nature of a criminal act, but not by legal error concerning the identity of the offender, can be illustrated in the example of speeding in traffic⁴. For this unlawful act, there may be doubt about existence (as when speeding is measured with error) and identity (as when it is difficult to read license plates from police photos). In the case of inaccurate measurement, denote the probability of not being fined for speeding even though one drives too fast by ε_1 , and the probability of being fined for speeding even though one has not driven too fast by ε_2 . The expected sanction from speeding is then $(1 - \varepsilon_1)s$, while the expected sanction from not speeding is ε_2s . A driver speeds if his or her benefit exceeds the net expected sanction $(1 - \varepsilon_1 - \varepsilon_2)s$, which demonstrates that the two kinds of error lower deterrence to the same extent⁵. This point has significant implications, e.g. that a more pro-defendant evidence rule, which increases the risk of false negatives (ε_1) as much as it reduces the risk of false positives (ε_2), will be neutral in terms of deterrence.

Thus, the traditional view is confirmed in the case where the existence of a criminal act is subject to doubt, although one caveat should be noted: If the source of legal error is that speed is measured inaccurately, drivers may realize that they can lower ε_2 by lowering their speed. Generally, as is well known from the economic theory of accident law⁶, when wrongful conviction is due to measurement and assessment error, the risk of wrongful conviction may lead to over-deterrence⁷. However, whether in the form of under- or over-deterrence, it is clear that deterrence can be affected by legal error concerning the nature of the defendant's act.

When, on the other hand, the issue to be decided by the court is the identity of the offender, a similar logic does not apply. If license plates, for example, are hard to read from police photos, and if this is the only source of legal error, ε_2 (the risk that a driver will be wrongly convicted of speeding due to a measurement error) will equal zero, but there will instead be some probability, ε_3 , of being sanctioned for another person's speeding. The expected sanction for speeding will then be $(1 - \varepsilon_1)s + \varepsilon_3s$, while the expected sanction for not speeding will be ε_3s , yielding a net expected sanction of $(1 - \varepsilon_1)s$. In this case where wrongful conviction is due to mistaken identity, it does not affect the net expected sanction.

As nothing in the argument just made is specific to the example of speeding in traffic, it is apparent that convicting the wrong person does not affect deterrence as suggested by the traditional view. Thus, whenever the existence of a crime is not in doubt, or, more accurately, when one does not risk being convicted of that particular

⁴ This illustration is derived from Posner (1999).

⁵ This result, first noted by Posner (2000), has been applied in e.g. Png (1986), Kaplow and Shavell (1994), Kaplow (1994), Polinsky and Shavell (2000), and Bar-Gil (2004).

⁶ Assessment error may e.g. concern the question of degree of negligence. In the context of tort law, Shavell (1987, pp. 79-82) has made clear that this kind of error is likely to lead to over-deterrence.

⁷ In particular, the possibility of wrongful conviction may deter people from entering into activities where the possibility is present, see Png (1986).

act, which one has chosen not to commit, wrongful conviction does not affect deterrence. Such is (generally) the case for a large category of crimes, including e.g. murder, assault, robbery and theft⁸.

Two remarks are worth adding to this conclusion. First, for some kinds of illegal behavior, both kinds of legal error may occur. For example, in the case of a firm's emission of pollutants, a court may have to decide both which firm emitted a given substance, and whether the emission was excessive⁹. This case does not present a theoretical difficulty, however, as the effect of an erroneous verdict will simply depend on the nature of the mistake. If the court mistakes the identity of the offender, the error will not affect deterrence, while there may be such an effect if it mistakes the nature of the defendant's act. Hence, it is the nature of the legal mistake that is essential for whether wrongful conviction affects deterrence, not the nature of the crime itself.

Second, as the analysis may have implications for the value of the accuracy of enforcement, it may be inquired how the distinction between the two kinds of legal error relates to enforcement methods. Following Kaplow and Shavell (1994, p. 601), one may distinguish between *examination*, *monitoring* and *investigation*. *Examination* of an individual and *monitoring* of any of a population occur when it is not known that a crime has been committed, while *investigation* of a crime occurs when a crime is known to have been committed. Thus, *examination* and *monitoring* rarely involve mistaken identity¹⁰, while mistaken identity is the typical mistake, when the method of enforcement is *investigation*. It follows that deterrence is unaffected by wrongful conviction mainly for crimes that are *investigated*, as mistaken identity is typical for such crimes, and does not affect deterrence.

The analysis now turns to ways other than that of the traditional view through which wrongful conviction may lower deterrence.

3. The Indirect Effects of Wrongful Conviction on Deterrence

Three effects are worth analyzing:

1) Wrongful convictions may end investigations, thereby lowering the probability that the true identity of the offender will be discovered (and that he or she will be convicted).

⁸ Rape committed by a stranger will also typically fall in this category, as a potential offender will not risk being convicted of an act he does not commit. How wrongful conviction of date rape affects behavior is more complex. For most acts of fraud, if a potential offender does not commit a particular fraudulent act, he or she will not be convicted of that particular act.

⁹ The same may occur in civil law; a tort case may e.g. involve doubt about both causality and negligence.

¹⁰ Although a monitor may possibly mistake the identity of an offender, as occurs in the example of speeding in traffic.

2) A potential offender may not want to forego a crime opportunity, fearing that others will then grasp the opportunity, in which case the former may be wrongly convicted.

3) The prospect of being (correctly) sanctioned may seem less threatening when there is a possibility that the sanction will come on top of a wrongful sanction.

3.1. Investigations May End When an Innocent Person Is Sanctioned

If the potential offender decides to commit the murder, and some other person is wrongfully convicted of it, investigation of the case is likely to cease, since the prosecution will have little incentive to continue investigating the case. Consequently, wrongful conviction may lower the probability that the actual offender is apprehended and convicted.

When evaluating the importance of this effect, it should be noted that also in the case of an acquittal, the police might drop the case, especially if there cannot be two trials against the same person for a given offense¹¹. Thus, the effect on deterrence of either acquitting or convicting a given defendant may be either positive or negative. More importantly, the effect appears likely to be small, as can be seen as follows. For a given kind of crime, denote by Z the number of offenses and by Y , the number of wrongful convictions. And denote by Δp the increase in the probability that investigations will end when there is a wrongful conviction, and by η , the probability that these investigations would have been successful. Then, if it were possible to eliminate all wrongful convictions, the decline in the number of wrongful convictions would be Y , and for each correction of a wrongful conviction, the increase in the probability of apprehending the actual offender would be $\Delta p \times \eta$. Thus, $Y \times \Delta p \times \eta$ more offenders would be convicted, implying that the expected sanction would increase by $(Y/Z) \times \Delta p \times \eta \times s$. Then, even if Y/Z is assumed to be high, such as 10% (which is very high for most kinds of serious crime where many convictions are based on quite robust evidence¹²), and even if $\Delta p \times \eta$ is assumed to be 30%, meaning that 30% of correct acquittals prompt successful investigations leading to the actual offender (investigations that would have been stopped had there been a wrongful conviction), the total effect on the expected sanction of never convicting wrongly, in itself highly unrealistic, would be in the order of three percentage points. Thus, again, even if unrealistic changes in the standard of proof are considered, the effect on deterrence seems quite small¹³. On the other hand, the effect may be larger under

¹¹Note also that if the police drop the case after an acquittal, there may be no one with the incentive to investigate further or to claim that the actual offender has not been found; in the case of a wrongful conviction, the wrongly convicted, or the people or organizations safeguarding the interests of the convicted, have the incentive.

¹² However, when the criminal sets up another person, the probability of an erroneous verdict is higher. When this possibility exists, the effect on deterrence may be significant, and more resources should then be devoted to avoiding wrongful conviction.

¹³For example, when analyzing the issue of the optimal standard of proof, it seems defensible to ignore this effect, at least as a first approximation.

special circumstances, as when an offender attempts to set-up someone else. The possibility for the court of mistaking the identity of the offender then becomes much higher than the averages given above, and the offender's incentive may then conceivably be affected by his or her expectations that a wrongful conviction will get him or her 'off the hook'.

3.2. Leaving a Crime Opportunity for Others

The second effect can be illustrated by a situation in which a person strays into a dangerous neighborhood, and where a criminal, who is known by the police to operate in that neighborhood, considers mugging that person. In this situation, the criminal may consider that if he or she does not mug the person, suspicion may still fall on him or her in the event that somebody else takes advantage of the opportunity. The point is that by not committing the crime, he or she increases (by one) the number of crimes committed by others, and hence the number of crimes for which he or she may be wrongly convicted¹⁴. Clearly, if the potential offender thinks in this way, the possibility of wrongful conviction may act as an inducement for him or her to commit the crime.

Again, however, the effect seems to be of limited importance in most realistic situations. It relies on three assumptions. First, that by committing a crime, an offender diminishes the number of crime opportunities open to others, and that others are restrained from illegal conduct by the number of crime opportunities open to them. For many crimes, this assumption seems to be only partly fulfilled. In short, there are many cars to steal and many banks to rob. Second, that the number of potential suspects is limited such that each potential suspect faces a significant probability of wrongful conviction. This assumption may perhaps be fulfilled in certain situations, such as in the mugging example, but note that even in this example, if there are e.g. ten other possible suspects in the neighborhood, and the probability that somebody will be wrongfully convicted is 10%, and the probability that somebody else will commit the crime is 50%, the overall probability of wrongful conviction is only .005. Under most usual circumstances, these numbers seem likely to be much lower. And finally, as the third assumption, the first potential offender must think that other potential criminals will not be deterred by the prospect of being sanctioned. If the potential offender is correct in so thinking, the crime will be committed in any event, which means that overall deterrence will not be affected by the possibility of wrongful conviction¹⁵.

Overall, for any realistic standard of proof, the effect on deterrence seems insignificant, at least under ordinary circumstances.

¹⁴ The situation is analyzed by Schrag and Scotchmer (1994), who investigate the role of evidence rules aimed at limiting the effect of possible prejudice on the part of the courts.

¹⁵ However, one can theoretically imagine bootstrap equilibria, where the prospect of wrongful conviction is also decisive for the other criminals. There may then be multiple equilibria, as analyzed by Schrag and Scotchmer (1997).

3.3. Two Sanctions May Not Be Twice As Threatening As One

The third indirect effect is based on the notion that a potential offender may consider a prospective sanction as less menacing, when there is a possibility that it may be applied on top of another sanction. In other words, sanctions may not enter additively into the utility function of the potential offender; the marginal disutility of the total sanction may be decreasing in the size of the total sanction. This may well be realistic: ten year's incarceration may not be felt twice as much as five years, e.g. because an offender is incapable of imagining what a long sentence would be like, and may underestimate the difference between five and ten years in prison. Also, the loss of reputation and the prospect of returning to a normal life may be the same, regardless of whether the total sanction is five or ten years imprisonment. On the other hand, when the sanction is monetary, the usual assumption of risk-aversion implies that the marginal disutility of a sanction increases with its size, in which case the indirect effect of unfair conviction on deterrence is positive, not negative¹⁶. However, the main point to be stressed here is that the effect, whether positive or negative, is likely to be of little quantitative importance. Under most normal circumstances, an innocent person's risk of being wrongfully convicted is quite small. In the example of homicide, if the murder rate is five per 100,000 people¹⁷, then even if the sanction were, as an extreme case, applied at random, the probability of being wrongfully convicted would of course also be five in 100,000. So, even if legal verdicts were wholly arbitrary, the probability of wrongful conviction would be small, as would then also be the consequence of a falling marginal disutility of sanctions. In reality, sanctions are of course far from random, they are often based on solid evidence, and hence the risk of wrongful conviction is, in the case of murder, much lower than five in 100,000. Admittedly, for other crimes, the crime rate is higher (but the rate of apprehension is lower), and of course, some people may face a higher risk of wrongful conviction than others. In extreme cases, it may be that their risk of wrongful conviction (due e.g. to prejudice against people with a prior criminal record) is high enough to affect the perceived gravity of sanctions for criminal acts actually committed. However, as an overall assessment, it seems safe to conclude that the effect of the falling marginal disutility of sanctions will under most realistic circumstances be of minor significance. Clearly, for the case of murder, it would be difficult to claim that an increase in the number of wrongful convictions would to any significant extent affect the incentive through this effect.

4. Summary and Implications

The main point of this article is that the traditional view on the effect of wrongful conviction on deterrence fails to hold for conviction of the wrong person. Both the

¹⁶ That may also be the case if the second sanction renders the offender insolvent, and if the monetary sanction is then converted into a prison sentence, while if the sanction is not converted, judgment proofness may imply that the second sanction loses some of its impact.

¹⁷ This is approximately the case in the US.

guilty and the innocent may be wrongly convicted of crimes committed by others, and so this risk does not directly lower the incentive to remain innocent. As mistaken identity is the typical error for crimes as murder, assault, robbery and theft, wrongful conviction has little if any effect on deterrence for these crimes.

While mistaken identity may indirectly affect deterrence, a closer analysis reveals that indirect effects are unlikely to be quantitatively important, except under special circumstances. Essentially, the risk of being convicted of a crime committed by someone else is not only relatively small in itself, but also shared between many people, which means that for any individual, the risk is likely to be too small to have a significant effect on incentives.

The analysis of this article bears on the issue of socially optimal rules of evidence, standards of proof and enforcement efforts. As one example, the traditional view leads to the idea (mentioned above) that a pro-defendant evidence rule, which increases the risk of wrongful conviction as much as it reduces the risk of wrongful acquittal, will be neutral in terms of deterrence. According to the present analysis, such a rule will unambiguously lower deterrence for an important category of crimes. As another example, it is sometimes argued that the high degree of accuracy of adjudication and the high standard of proof in criminal law can be explained and justified in terms of deterrence. The present analysis indicates that society's strong desire to avoid wrongful conviction must be explained and justified by other considerations, e.g. by a wish to avoid the unfairness of sanctioning the innocent, or, in a more narrowly utilitarian interpretation, by a wish to avoid imposing a harmful sanction on an innocent person¹⁸, when the sanction is not justified by a gain in deterrence.

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¹⁸ One rationale for not wishing to do so may be risk aversion.

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