

LEGAL PROBABILISM

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NOTES ON REDMAYNE'S THE RELEVANCE OF BAD CHARACTER

1. Redmayne argues that evidence of prior crimes can be highly probative of guilt. This argument counters the common assumption that evidence of prior crimes is prejudicial and must not be admitted in court. He later qualifies his stance about evidence of prior crimes by discussing how jurors realistically process prior crime evidence in court.
2. Some background first. What does it mean for evidence to be probative of guilt? The likelihood ratio is a common measure of the value (or probative value) of evidence in court. It is useful for assessing evidence in the form of statistics or numbers. The likelihood ratio looks like this $P(E|G)/P(E|I)$. If the ratio is above 1, then the evidence E supports the hypothesis G , and if it is below one, then it supports the competing hypotheses I . Think of G and I as competing hypotheses, one put forward by the prosecution (e.g. the defendant did it) and the other put forward by the defense (the defendant was away).
3. This setup should make sense. If it is more likely to obtain evidence E under the hypothesis G than under I —so the likelihood ratio is above one—then E supports G compared to I . But if it is more likely to obtain evidence E under I than under G , then E must support I . And if E is equally likely under both hypotheses, then E will be irrelevant or neutral.
4. There is also a graded notion here. The greater $P(E|G)/P(E|I)$ (for values above one), the stronger the support for G compared to I . The lower $P(E|G)/P(E|I)$ (for values below one), the stronger the support for I compared to G .
5. Let's turn to evidence about prior crimes. Redmayne notes (p. 688) that human behavior exhibits remarkable regularities. The scholarly consensus is that personality and character, as well as the specifics of each situation, influence how people are going to behave. Since human behavior follows patterns and exhibit regularities, it is not surprising that people who have acted in certain ways before often repeat their actions in the future. Crime statistics consistently show that those who committed crimes in the past reoffend at relatively high rates. There remains an empirical question why that is the case.
6. Look at Table 1 on p. 694 and take burglary as an example. The numbers show that people who committed a burglary in the past reoffend at a 20% rate. This figure is from the UK, based on Criminal Statistics in England and Wales 1996. Numbers might change over the years or by country. By contrast, the rate of offending is much lower in the general population. Table 2 on p. 695 shows that the rates of offending for burglary—what Redmayne calls comparative propensity—is 125 higher for those who have committed a burglary before than the general population. The table gives us this comparative propensity ratio:

$$\frac{P(\text{person committed burglary } x | \text{person committed burglary before } x)}{P(\text{person committed burglary } x | \text{person committed no burglary before } x)} = 125.$$

7. How probative of guilt is this evidence of prior burglary when someone is accused of committing burglary? If we take the 125 figure at face value, Redmayne writes (p. 695-696):

...if a fact-finder thinks that the evidence indicates that a defendant on trial for burglary is as likely as not to be guilty—the odds on guilt are 1:1—she should, on hearing that he has a previous conviction for burglary, revise those odds to 125:1. That would correspond to a 99 per cent probability of guilt.

8. Evidence about prior crime seems even more probative than an eyewitness identification. Again Redmayne (p. 696):

Some authors have tried to quantify the strength of eyewitness identification evidence, in the situation where an identification is made from a line-up. Estimates of the likelihood ratio vary from 1.2 to 15

9. One problem with this argument is that the ratio of comparative propensity isn't a likelihood ratio in the standard form $P(E|G)/P(E|I)$. It rather has the form $P(G|E)/P(G|\neg E)$. Just go back to the formula: in the likelihood ratio we condition on the hypotheses instead, but in Redmayne's comparative propensity we condition on evidence of prior crimes.

10. The likelihood ratio should be:

$$\frac{P(\text{person committed burglary before } x | \text{person committed burglary } x)}{P(\text{person committed burglary before } x | \text{person did not commit burglary } x)} = ???.$$

Can we derive this likelihood ratio from the comparative propensity? It is not clear how.

11. Here is another way look at the issue. A defendant is charged with burglary. Initially, without knowing much about this defendant, the prior probability of guilt must be set low, roughly the rate at which the general population commit burglary. Next, after learning the defendant committed a burglary before, the guilt probability should grow 125 times. So it must go up to 20%, the rate at which people who committed a burglary before reoffend.
12. What about the example in which the prior guilt probability is 50% because of other evidence against the defendant? How much should this probability go up after learning the defendant committed a prior burglary? Does Redmayne's 99% posterior probability make sense?
13. There are other reasons to be wary of the 125 figure. First, the data are about reoffending within two years (p. 696), so this is a relatively short period of time. Second, reoffending data are based on rates of re-arrest and then re-conviction, not reoffending (p. 700). Police officers may well focus on the usual suspects and more readily rearrest those who are known to them. So the rate of reoffending may be inflated in the re-conviction data for those who have been previously convicted. By contrast, the rate of offending may be lower in the general population than what transpires from the conviction data. But Redmayne thinks that even if the figure is reduced fivefold, evidence of prior burglary would still very probative.
14. Toward the end of the paper, Redmayne questions the suitability of the likelihood ratio model of probative value when it is applied to how jurors reason with evidence. He considers another approach, what he calls conditional relevance (pp. 710-711):

When there is nothing to connect the accused with a particular crime except bad character or similar crimes committed in the past, the probative value of the evidence is nil and the evidence is rejected on that ground. When there is some evidence connecting the accused with the crime, in the eyes of most people, guilt of similar offences in the past might well be considered to have probative value.