



Unintentional Bias in Court



When asked to interpret information and draw conclusions, people are prone to a number of well understood, unintentional errors in reasoning. These are known as cognitive biases. This POSTnote examines how cognitive biases affect reasoning and decision-making, and outlines strategies to minimise their influence in court.

Background

Information which bypasses awareness can still influence decision making. While information is processed in this way to maximise limited cognitive capacities, one consequence is that people are not always aware of all of the factors that guide their decisions. Decision making is therefore susceptible to the influence of irrelevant factors and preconceptions, which can lead to suboptimal reasoning. The unintentional reasoning errors that people systematically make are collectively known as 'cognitive biases'. Psychologists have identified a large number of cognitive biases, many of which are relevant to court room proceedings.¹ Only a few have been researched in this context: some of which are summarised in Box 1 and are the subject of this note.

Decision making under uncertainty

Cognitive biases are particularly likely to influence reasoning when people make decisions under uncertainty.² Identifying suspects, and evaluating evidence, accusations and alibis all involve determining likelihoods with incomplete information. Cognitive biases are therefore directly relevant to the criminal justice system where unbiased reasoning and fair judgement are of paramount importance. While cognitive biases may arise at various points in the system (such as

when the police first process a crime, or in forensic investigation), this note focuses on their effects on court room participants (witnesses, jurors and judges).

Overview

- Assumptions, stereotypes and contextual information can influence judgement unintentionally, and result in suboptimal reasoning.
- Studies show that this affects decisions of forensic experts, witnesses and mock jurors.
- As most people are unaware of their cognitive biases, they are hard to control, but their effect may be mitigated by a variety of targeted strategies.
- Training judges and educating jurors may reduce the influence of cognitive biases in court.
- The President of the Supreme Court advocates improved access for researchers to study biases in the justice system.

Box 1. Examples of cognitive biases

- **Confirmation bias** occurs when people seek, weigh or interpret information in a way that conforms to their pre-existing beliefs or assumptions.³ For example, mock jurors who endorse statements about the leniency of the justice system tend to favour conviction in a burglary case at a higher rate than those who do not.⁴
- **Contextual bias** occurs when information about the context of an event, or the way in which some information is presented, influences reasoning but is logically irrelevant to the decision at hand. For example, the presence of routine, day-to-day contextual information (such as whether the suspect has an alibi) can influence the results of forensic fingerprint identification.⁵ Further details and mitigating strategies are outlined in a POSTbrief on cognitive bias in forensic investigation.⁶
- **Unintentional stereotype bias** occurs when people associate certain traits with their perception of a person's social group, such as race, gender or age. These associations can influence decisions and behaviour, even though people are unaware that they harbour them.⁷ For instance, in a video-game simulation, US police officers tended to shoot unarmed black suspects at a higher rate than unarmed white suspects, an effect known as 'weapon bias'.⁸

Testing cognitive bias in the justice system

Research shows that cognitive biases are pervasive and manifest in a range of scenarios.⁹ The main approaches to test for cognitive biases in the justice system are:

- **Analysing real cases:** Researchers observe, rather than get involved in the trial, so they cannot control all possible variables. It is therefore important to establish which factors might account for particular outcomes, and whether any factors other than the evidence at hand might have affected decisions.
- **Case simulations:** Researchers stage mock trials, allowing them to control variables (by having two groups of participants view exactly the same case with just one feature changed, to observe the effect of this feature on verdicts). Mock jury studies range from those conducted in a court room setting with, for example actors playing judges and lawyers, to those where participants watch videos or read case scenarios in a research facility.¹⁰
- **Testing practitioners:** Researchers can also test for unintentional bias in actual practitioners in the justice system, such as police, prosecutors and judges, using the Implicit Association Test,¹¹ a measure of unintentional attitudes, but they then have to establish correlations between the biases they find to behaviour in real cases.

Multiple studies show that cognitive biases affect judgements in a wide variety of circumstances and professions,¹² but more research is needed to determine exactly how they affect judicial processes in the UK. The following sections summarise current research from a number of jurisdictions, including the UK, on external influences on jurors; witness accuracy; and the effects of unintentional social biases in the justice system.

Influence of external factors on jurors

Pre-trial attitudes

UK research suggests that mock jurors' attitudes about the workings of the justice system can influence the decisions that they make in studies designed to reflect a court case.⁴ Researchers measured the extent to which participants agreed with statements about the justice system, and observed how these opinions correlated with decisions to make a conviction in a burglary case. It was found that mock jurors who endorse statements such as: "too many obvious guilty persons escape punishment because of legal technicalities" favoured conviction more frequently than those who did not endorse such statements.

Trial publicity

All juries are directed by judges not to research the case intentionally, and to ignore any media reports that they see. Failure to comply can amount to contempt of court.¹³ However, exposure to trial publicity may nevertheless influence the decisions of jurors who have no intention to use it to inform their decision making. An analysis of 44 US-based studies revealed that negative pre-trial publicity significantly affects jurors' decisions about the culpability of the defendant.¹⁴ In another US-based case simulation, mock jurors viewed media reports of a real case, later viewed a

video of the trial, and then deliberated to reach a verdict. Even though they were directed not to discuss the media reports, exposure to the reports influenced both their discussions and interpretation of trial evidence during jury deliberations. Jurors exposed to media reports portraying the defendant in a negative light were significantly more likely to discuss ambiguous trial facts in a manner that supported the prosecution, but rarely in a manner that supported the defence.¹⁵ While most research on pre-trial publicity is from the US, psychologists think that it is probably a general effect that could arise elsewhere.¹⁶

A Ministry of Justice report found that in a sample of jurors, 70% serving on 'longer, high profile cases' recalled media coverage of the case. Of those jurors who recalled media coverage from before the trial, 20% said they had found it difficult to disregard.¹⁷ When asked about media coverage emphasis, less than half could identify whether the reports framed the defendant as innocent or guilty, but of those who did, almost all recalled the defendant being framed as guilty. Other studies have shown that an inability to recall the influence of a particular factor does not necessarily mean that it will not unintentionally affect deliberation,^{18,19} which calls into question the effectiveness of judicial instructions to ignore publicity.

Question style and accuracy

When trial participants are cross-examined by the opposing party in court, it is generally accepted by the legal profession that asking 'leading questions' can help to determine whether a witness is being intentionally deceptive.²⁰ Leading questions are those that demand the respondent answers in a particular way, such as "Isn't it true that the door was open?" (Box 2). However, these aspects of question style can affect the reporting accuracy of those people who have no intention to deceive.^{21,22} UK studies designed to replicate cross-examination in a mock court room, reveal that when adult witnesses are asked directive leading questions (see Box 2) about an event that they have seen on film, they give significantly less accurate responses than when questioned in a non-directive manner.²³

Improving accuracy

As cognitive biases may affect interviews (Box 3), interview protocols are used when police first take statements to elicit information as accurately as possible.^{24,25,26} However, leading questions remain an approved part of the cross-

Box 2. Leading questions

Leading questions are those that demand a particular answer.²⁷

- **Leading:** demands the respondent to either affirm or deny a particular suggestion, such as: "Were you at home on Tuesday?"
- **Non-leading:** leaves it open as to how the respondent answers, such as: "Where were you on Tuesday?"

The form ('directive' or 'non-directive') also makes a difference:

- **Directive form (sometimes called a 'tagged question'):** "The young woman who answered the door had long hair, didn't she?"
- **Non-directive form:** "Did the young woman who answered the door have long hair?"

Box 3. An example of cognitive biases in interview simulations

In UK studies designed to simulate an interview, when participants are led to believe that a suspect is likely to be guilty of cheating on a test, they tend to ask more guilt-presumptive questions such as 'are you ashamed of what you did?' Furthermore, these questions can have a 'self-fulfilling prophecy effect' on the suspect's verbal behaviour: for example, independent observers, who do not hear the questions, think that suspects who have been asked more guilt-presumptive questions are more likely to be guilty than those asked neutral questions.²⁸

examination procedure in court. Some experts advocate that lawyers should use simple language wherever possible.²² Other strategies may also increase accuracy. For example, a UK case simulation demonstrated that when mock witnesses received a booklet designed to familiarise them with the cross-examination procedure, they gave more accurate answers with fewer errors compared with those not given this information.^{21,29}

Witness confidence and accuracy

Some factors can make a witness more certain that an event occurred without making it more likely that it did.^{30,31} Further, people may interpret a display of confidence as an indication of accuracy, even though it does not necessarily increase the likelihood that a witness is accurate.^{32,33}

Factors which increase witness certainty

A Dutch study showed that peoples' certainty in a recollection increases the more they retell the story, which may be relevant when eyewitnesses give multiple interviews.³⁴ Furthermore, US research shows that hearing feedback that corroborates a claim raises mock witnesses' certainty in the claim, even when feedback is misguided (Box 4). Post-identification feedback affects real UK witnesses: telling them if they did or did not pick the suspect affects how difficult they think the identification task was.³¹

Juror interpretations of witness confidence

A display of confidence by a witness might reinforce jurors' beliefs that a witness is accurate whether or not they are.³² In a US study, participants who read a transcript written by an eyewitness displaying high confidence subsequently remembered the eyewitness as having had a better view of the event than participants who read a transcript from an eyewitness displaying low confidence.³³ In another US study where an eyewitness displayed greater confidence in court than in their original statement, mock jurors only reduced their estimation of the eyewitness' accuracy if the eyewitness was explicitly challenged about the inflation of confidence during cross-examination.³⁵

Raising awareness of confidence inflation

US evidence suggests that showing mock jurors a video of a witness identifying a suspect enables them to be more aware of a change in the level of confidence displayed by the witness between the identification and the trial.³⁶ Mock jurors evaluate witnesses who display greater confidence in court than they did in the videoed identification procedure to be less credible, accurate and consistent than mock jurors

Box 4. Increased certainty after hearing confirming feedback

In a US case simulation, eyewitnesses who wrongly identified a suspect, and then had feedback (falsely) confirming the accuracy of their identification, recalled events differently to those who received no such feedback.³⁰ Specifically they recalled:

- their view of the suspect as having been better
- being better able to make out details of the suspect's face
- having paid more attention at the time of witnessing
- having taken a shorter length of time to make their identification
- greater confidence in their identification of the suspect.

who only hear a transcript of the identification procedure read at the trial. While some UK courts now show jurors videos of original identification procedures, current practice with witnesses' original statements is that they are read to jurors, rather than shown on video.³⁷ The Eyewitness Research Group at Royal Holloway is examining if showing mock jurors a video of the witness's original statement also helps jurors to identify changes in the level of confidence that the witness displays.³⁸

Unintentional stereotype bias

Research shows that people unintentionally attribute stereotypical traits to individuals from particular social groups, and that these attributions affect decision making.^{11,39,40} Researchers have developed a test (the Implicit Association Test) to measure these unintentional biases and how they correlate with real-world discriminatory behaviour.^{7,41} For instance, in a study of Swedish recruiters, those who harbour unintentional racial biases are significantly less likely to offer a job interview to an applicant with a Muslim sounding name compared to those with a Swedish name.⁴² A study of US doctors shows that those with unintentional racial biases were less likely to offer treatment to black patients with heart disease than to white patients.⁴³ These biases differ from explicit prejudice in that people may not be aware of them, or able to directly control their influence, and people can be unintentionally biased against members of their own social group.^{44,45} For these reasons, measures designed to tackle explicit prejudice are unlikely to be effective in reducing unintentional social bias.⁴⁶ However, targeted strategies enable people to control how their unintentional social biases affect behaviour.^{47,48}

Unintentional bias in the UK

UK studies show that unintentional racial biases are widespread.^{47,49} For instance, in a UK study, participants with a greater degree of unintentional racial bias against Asians are less likely to take advice from and return an email sent by someone with an Asian name than those with a smaller degree of unintentional bias.⁵⁰ Further, preliminary results suggest that UK participants manifest weapon bias (Box 1) against black people.⁵¹ While there is little research into whether UK judges or magistrates harbour unintentional racial biases, studies from the US show that trial judges⁵² and death penalty lawyers⁵³ harbour unintentional biases against black people, although how these biases manifest in practice is less clear.⁵⁴ A recent Ministry of Justice study

Box 5. Differential treatment in the UK Youth Justice System

A report on differential treatment in the youth justice system reveals that:

- The chances of a young black male's custodial sentence at a Crown Court being 12 months or longer are 6.7 times those of young white men, accounting for other variables.
- The chances of a young male with parents of different ethnicities being prosecuted are 2.7 times that of a young white male with similar case characteristics.
- For a young female with parents of different ethnicities, the chance of being prosecuted is 6 times that of a white female who has committed a similar offence.⁵⁵

reported that jurors from the UK showed no tendency to convict a black or Asian defendant more than a white defendant in a case simulation.¹⁷ Because some participants "said they thought that race was a factor in these cases"⁵⁶, this study does not necessarily rule out unintentional racial bias. Unintentional social biases may manifest at many levels, from the point of entry into the justice system, to witness testimony, to the gathering and presentation of evidence. People of different ethnicities and genders are treated differently in the youth justice system, even when other variables have been accounted for (Box 5).^{55,57} It is not possible to say whether these differences are due to social biases without carefully designed research studies. The Centre for Crime and Justice Studies is researching how assumptions about social groups might bias criminal justice decisions. A report on gang association, ethnicity and justice will be published in October 2015.⁵⁸

Stereotypical attitudes about rape victims

There is debate about why comparatively few of the rape cases reported to the police lead to convictions.⁵⁹ Research shows that mock jurors' stereotypical beliefs about rape of women, which are unsupported by evidence, nevertheless influence decisions made in case simulations.^{60,61,62} A UK case simulation shows that mock jurors:

- routinely emphasised the significance of a lack of signs of physical injury to their not guilty verdicts, despite the fact that research shows that rape is not necessarily accompanied by evidence of physical force.⁶¹
- cite the victim's lack of emotional response as an explanatory factor in their not guilty verdicts,⁶¹ even though rape victims may display a range of emotional states when discussing their experiences, from being distraught through to being emotionally numb.⁶³
- consider a prompt complaint as 'supporting evidence' that rape has occurred, while a delay of three days between the alleged offence and the report made mock jurors suspicious of the complainant's credibility.⁶¹ In recognition of the complex factors that may discourage immediate reporting of a rape, the Government removed the requirement that a sexual offence complaint should be made 'as soon as reasonably expected' in 2007.⁶⁴

Juror education on attitudes towards rape

Informing mock jurors that stereotypical attitudes about rape either contradict scientific evidence, or are empirically

unsupported, reduces the extent to which these attitudes influence decisions.⁶⁵ In a further case simulation, jurors received information explaining the possible emotional responses of rape victims, as well as the reasons why a victim might not physically resist or report the rape immediately. The study revealed that both measures significantly reduced the influence of stereotypical attitudes about delayed reporting or a lack of emotional response on the part of the victim on juror's decisions. However, a lack of physical resistance still affected assessments of the complainant's credibility.

It is emphasised in this research that it is significant that the educational guidance shown to have an impact included explanations as to why rape victims might display counter-stereotypical behaviours. The Crown Court Bench Book (containing various judicial instructions to guide juries) includes a set of directions aimed at dispelling unsupported stereotypical beliefs about rape,⁶⁶ but does not explain why these beliefs are unsupported. It is argued that there ought to be more emphasis on the use of these directions by judges during rape trials.⁶⁷

Research, evidence and policy

Experts note a lack of research on differential treatment within the criminal justice system, particularly with regard to policing styles and the proceedings of the Crown Prosecution Service (CPS).⁵⁵ The Criminal Justice Alliance, a coalition representing over 70 organisations, acknowledges the need for further research to determine the sources of differential treatment, and whether it is partly accounted for by unintentional bias.

Use of research in policy making

The Judicial College – responsible for training the courts' judiciary in England and Wales – offers some training and information about cognitive biases. Psychologists delivered training on cognitive biases for employment tribunal judges in September 2015. The CPS delivers training on rape stereotypes to prosecutors.⁶⁸ Further research is needed to determine whether these measures mitigate the effects of cognitive biases in the processing of cases. In a recent speech, the President of the Supreme Court, Lord Neuberger, cautioned judges to think about how their unconscious attitudes may play a role in their judgements.⁶⁹ He has subsequently said that in light of the evidence that cognitive biases affect human decision making, he advocates for a better understanding of how they affect the justice system, and of what can be done to mitigate these effects. He acknowledges that affording access for researchers to all areas of the justice system would help to deliver this, but cautions that this must not interrupt or affect cases. Lord Neuberger also advocates education and strategies to limit the effects of cognitive biases for key participants in the criminal justice system, including judges, magistrates and jurors.⁷⁰

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- 40 Hahn, A. et al. 2013, Awareness of implicit attitudes, *Journal of Experimental Psychology*, 143:3, 1369-1392. People are typically not aware that they are influenced by these unintentional social biases in the instance that they make a decision. However, research suggests that if people are questioned in the right way, and asked to reflect carefully on whether they might be affected by any social biases, they are able to predict whether they will be unintentionally biased towards particular social groups when undertaking a test designed to measure unintentional bias.
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