

Bias in expert witness practice: sources, routes to expression and how to minimise it

Nigel Eastman & Keith Rix

ARTICLE

SUMMARY

The expert witness practice of psychiatrists is under constant scrutiny by the courts and, in the UK, the General Medical Council, as well as within appraisal and revalidation as part of a doctor's overall practice. Regulation and appraisal of expert witness practice must address not only technical competence, including demonstration of a real understanding of the interface between medicine and law, but also ethical probity, including in respect of bias, which is the most challenging appraisal focus. In psychiatry, there is much room for 'values expression', and therefore bias, in the offering of expert opinion. This article first describes various legal and psychological definitions of bias; then addresses the sources and routes to expression of bias within expert witness practice, viewed legally, psychologically and neuroscientifically. Finally, it proposes ways in which inevitable bias can be minimised by the individual practitioner.

LEARNING OBJECTIVES

After reading this article you will be able to:

- describe and distinguish different legal and psychological definitions and categories of 'bias' in expert witness practice
- identify the sources and routes to expression of bias in expert witness practice
- understand how such bias is manifested and detected by judges and how it might be minimised

KEYWORDS

Expert witness; bias; psychological definition; neuroscience; legal definition; sources; expression

expertise' (*Naviera SA v Prudential Assurance Co Ltd (The Ikarian Reefer) (No.1)* [1993]), with the corollary that bias means 'an absence of demonstrated independence or impartiality' (*Yiacoub v The Queen* [2014]). Hence, in many jurisdictions, expert witnesses are required to make a declaration of understanding that their duty is to help the court by giving assistance on matters within their expertise by way of independent, objective and unbiased opinion.

Yet much bias is likely to be unconscious, or psychologically denied, both in its origins and in the potential routes to its expression within legal process, as well as being commonplace. Hence, research has shown that 'forensic psychiatrists wildly underestimate the biasing effects of their own conflicts of interest and other factors', to the extent that it might be concluded that 'a state of relative denial exists [...] as to the power of potential biasing factors to affect their decision making' (Commons 2004). For example, in one study in which forensic psychiatrists and forensic psychologists were randomly assigned to prosecution and defence instructions, were provided with identical case materials and documents by the lawyers and were paid equally, it was found that the experts interpreted the case material in a way that was favourable to their instructing team (Murrie 2015).

The risk of expressing bias is clearly likely to be present if the witness goes beyond the legal boundaries of their expertise (see *Kennedy v Cordia (Services) LLP* [2016]). However, it may occur even when remaining within those boundaries. Equally, a witness may be at risk of expressing bias if they are uninformed about working at the boundary between clinical and legal constructs, in terms of knowledgeable 'clinico-legal mapping' (Eastman 2018, 2022a, 2022b); that is, distinguishing 'mental state' from any 'relevant legal definition/test' and then relating the former to the latter.

This article therefore addresses a number of questions:

- What is bias (in expert witness practice) legally and psychologically?

Nigel Eastman is Emeritus Professor of Law and Ethics in Psychiatry and an Honorary Consultant Forensic Psychiatrist in the Institute of Medical and Biomedical Education, St George's, University of London, UK, being dually qualified in medicine and law. **Keith Rix** is an Honorary Consultant Forensic Psychiatrist with Norfolk and Suffolk NHS Foundation Trust, Visiting Professor of Medical Jurisprudence at the University of Chester, and Mental Health and Intellectual Disability Lead of the Faculty of Forensic and Legal Medicine of the Royal College of Physicians, London, UK. He is an editor of *Rix's Expert Psychiatric Evidence* (2nd edn) (Cambridge University Press 2020).

Correspondence Professor Nigel Eastman. Email: neastman@sgul.ac.uk

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'If I got myself an impartial witness, I'd think I was wasting my money' – Melvin Belli, a renowned US trial lawyer (Huber 1991, p. 18).

Avoidance of bias lies at the legal and ethical heart of good expert witness practice. Justice requires that 'an expert witness should provide independent assistance to the court by way of objective unbiased opinion in relation to the matters within his

- What are the sources of expert witness bias?
- What are common expressions of expert witness bias within legal process?

plus

- What alerts judges to possible bias?
- and
- How can experts, individually and ‘corporately’, minimise their own bias?

^a Some of the text in this section of the article is taken from Eastman (2018).

What is bias?^a

Taking a physical analogy, in the game of lawn bowls bias is observed in terms of its ‘cause’ or its ‘effect’ (bias ‘in a bowl’ – cause; or ‘in its trajectory’ – effect). We might also distinguish ‘fixed’ bias (always in one direction) from ‘variable’ bias (bias applied depending on circumstance, for example whether a witness is instructed by defence or prosecution). Further, in human behaviour we might distinguish ‘implicit’ bias (so that it may not be evident, and/or may be effected without awareness) from ‘explicit’ bias (which is evident, and so is likely to be effected with awareness). Finally, bias is distinct from lack of independence. Psychologically, we might draw a distinction between ‘conscious’ and ‘unconscious’ bias, and perhaps even between ‘sub-conscious’ and ‘pre-conscious’ bias.

In the legal context, bias most often arises as an issue not in relation to experts but in relation to judges; and although in *R (Ngole) v University of Sheffield* [2017] it was held that ‘bias is a term with specific legal meaning’ and reference was made to ‘the threefold classification of “actual”, “presumed” and “apparent” bias’ set out clearly in *Locobail (UK) Ltd v Bayfield Properties Ltd* [2000], there is no definition of bias as it applies to expert witness practice, albeit case law abounds with examples of biased practice. The law also sometimes confuses ‘what is bias’ with ‘a particular expression of bias’ (see below).

Yet the courts are themselves potentially inherently biased in regard to incorporation of expert evidence. Since the law approaches ‘a truth’ and not ‘the truth’ (constrained by rules of evidence and legal process, including defined burdens and standards of proof); and the particular ‘truth’ found depends not only on the clinically relevant data collected but also then on the subset of such data that is legally admissible, the allowed manner of its presentation and the model used for inference from the data. Hence, minimising expert witness bias aims only at not distorting the particular ‘truth’ that may arise out of the expert opinion expressed within legal usage of that expert opinion; not at arriving at, or expressing an opinion which is

necessarily ‘true’ within a clinical paradigm. The core objective of the expert can only (and must) be ‘to aim to aid the effecting of justice’ within the relevant evidential and process rules, and not ‘to aim to affect the justice outcome’.

Locations of the sources of expert witness bias

Bias can arise within an expert witness, including as a reflection of their ‘relationship’ with the subject of assessment (also as an inherent reflection of the adversarial legal system, including ‘adversarial bias’, broadly defined – see below).

Bias from within the expert

Viewed legally (Box 1)

The most obvious example of bias arising from within the expert as observed judicially occurs in ‘the dogmatic expert’ or one ‘with a scientific prejudice’ (*M v St Helens Borough Council* [2018]). Indeed, ‘strongly held views even falling short of being dogmatic or prejudicial’ can also result in bias (*A (Children) v B (Children) v R (Children)* 2014). And even views amounting to no more than ‘disapproval of a contradictory view’ can give rise to a perceived risk of bias (*Professional Standards Authority for Health and Social Care v General Medical Council* [2014]). Or a ‘preference’ to act for one side or the other may be deemed judicially to result in a presumption of bias (*KCR v The Scout Association* [2016]) (but not necessarily so: see *LT v Lothian NHS Health Board* [2018]). Although Hodgkinson & James (2014) describe how, in practice, ‘in professional negligence disputes it can be very difficult to find an expert who is prepared to criticise a fellow member of the same profession’.

We have found 14 terms used by the courts in relation to the sources of bias from within the expert, albeit they seem sometimes actually to identify the type of bias by way of its cause (and some are

BOX 1 Legal perspectives on types of biased expert

- ‘The dogmatic expert’
- ‘The expert with a scientific prejudice’
- ‘The expert with strongly held views, though falling short of being dogmatic or prejudicial’
- ‘The expert expressing disapproval of a contradictory view’
- ‘The expert with a preference to act for one side or the other’

perhaps applicable only to judicial and not expert witness bias). Overall, the list (shown in [Box 2](#)) is something of a categorical ‘ragbag’. Some of the terms, such as ‘hindsight’, ‘outcome’, ‘confirmation’ and ‘observational’ bias, can be seen as clearly based in specific psychological mechanisms, many being heuristic in nature (see below).

Confirmation bias is said legally to arise when a decision maker seeks only to collect or give credit to evidence that leads to (the confirmation of) a particular preferred result or initially formed opinion. This can be subconscious and ‘need not indicate a deliberate intent to distort an evidence collection or decision making process’ (*R (British American Tobacco (UK) Ltd) v Secretary of State for Health* [2016]). In *Cooper v Royal Berkshire NHS Foundation Trust* [2015] the judge decided that an expert’s opinions required particular scrutiny because, ‘having felt from the beginning that this was a case in which [post-partum eclampsia] had occurred, he may have become unconsciously biased and omitted matters in his report which ought to have been considered by him’. (This was also an issue in *Hawkes v Warmex Ltd* [2018] and in *Arroyo v Equion Energia Limited* [2016].) This could also be an example of what Pamplin (2020) describes as ‘anchoring’ bias (Pamplin has identified five forms of ‘unconscious bias’ to which expert

witnesses may be prone: contextual, cueing, confirmation, stereotyping and anchoring).

In clinical negligence cases, the courts recognise two particular forms of potential bias: hindsight bias and outcome bias. Hindsight bias occurs ‘when the outcome of the incident influences the way it is analysed’ and ‘when actions that should have been taken in the time leading up to an incident seem obvious because all the facts become clear after the event’, resulting in a focus on ‘blaming staff and professionals closest in time to the incident’ (*Re E (A Child)* [2013]). Outcome bias was an issue in *LT v Lothian NHS Health Board* [2018], wherein one expert admitted that he had taken into account the clinical outcome, resulting in ‘subtle influence of the knowledge of the adverse outcome’.

Viewed neuroscientifically

Decades of research have demonstrated that unconscious cognitive bias is both commonplace and very difficult to eradicate. Whilst neuroscience investigations demonstrate that effective decision-making involves not just cognitive centres of the brain, but also emotional areas. Furthermore, the interplay of cognitive–emotional processing allows conflicts of interest to affect decision-making in a way that is hidden from the person making the decision (see Cosgrove 2012). In a report on two functional magnetic resonance imaging (fMRI) studies using moral dilemmas as probes and applying the methods of cognitive neuroscience to the study of moral judgement, the authors conclude that ‘moral dilemmas vary systematically in the extent to which they engage emotional processing, and that these variations in emotional engagement influence moral judgment’ (Greene 2001).

Viewed psychologically

At a psychological level of investigation the distinction between ‘rational’ (‘system 2’) and ‘non-rational’ (‘system 1’) functioning, expressed in terms of ‘slow’ and ‘fast’ thinking (Kahneman 2011), is key. Hence, the ‘cognitive’ system 2, which adopts a comprehensive rational model, with conscious setting of rules about what data are to be deemed relevant and what method of analysis and weighing up is to be adopted, is ponderous and resource hungry by comparison with the ‘associative’ system 1, which operates ‘automatically’ and speedily, without effort or conscious direction (and which underpins ‘skill’). Put simply, system 1 is fast, but more likely to ‘get it wrong’; whereas system 2 aims at maximum rationality and ‘accuracy’, but is slow and resource hungry (see Eastman 2022a for detailed explanation).

BOX 2 Some legal types and definitions of bias seen as arising from within the expert

Types

Actual; apparent; presumed; selectorial; interest; deliberate; conscious; unconscious; subconscious; cognitive; hindsight; outcome; confirmation; observational

Definitions

Selectorial bias: lawyers choosing experts whose opinions are known to support the case; this can lead to polarisation, with the only opinions advanced being the more extreme views on the spectrum and the court being denied evidence from experts whose views are more moderate or mainstream.

Outcome and hindsight bias: the outcome of an incident influences the way it is analysed, or actions not taken in the time leading up to an incident are judged as obvious failures to act, once all the facts become clear after the event.

Confirmation bias: reliance only on evidence that leads to confirmation of a particular preferred opinion or an initially formed opinion (including unconscious or subconscious confirmation bias)

Anchoring bias: sticking to conclusions drawn from the first pieces of evidence addressed and failing to attach sufficient weight to potentially contradictory evidence acquired later.

Clearly, expert witness opinion might be expected properly to rely predominantly on system 2 psychology. And yet it is inevitably influenced, at least in part, by system 1; with the risk of significant error (in system 2 terms), through failure of that system to override system 1. For example, an expert witness may address a particular case, either clinically or clinico-legally, in terms of some of its particular characteristics appearing to be similar to other cases they have seen before, thereby expressing one particular type of heuristic, and bias.

System 1 reduces the cognitive resources needed for a task, utilising ‘associative coherence’ and other heuristics to make things feel familiar, effortless and implicitly right. Hence, anything that promotes associative coherence will increase cognitive ease via, for example, repeated experience, an idea presented simply and clearly, or a concept that you are already primed to expect. By contrast, stimuli that lack associative coherence cause cognitive strain, activating system 2 and making you more vigilant, suspicious, uncomfortable and rigorous – a state in which you work harder and make fewer errors, but are less intuitive or creative (Box 3).

There is insufficient space to explore comprehensively the implications of heuristics for bias, and the reader is urged to read around the topic, given its relevance to decision-making within expert witness practice.

Values and bias

Values are intrinsic to decision-making, are intrinsic to the operation of heuristics and are perhaps likely to be expressed more strongly through system 1 than system 2 psychology. The only way to avoid the influence of values entirely is not to make a decision at all. Whilst failing to acknowledge their role and influence in decision-making must mean that they operate unseen, potentially expressed through one or more of the psychological (or perhaps neuro-psychological) routes that we describe.

What is ethically dangerous is to pretend that one’s values do not influence one’s decision-making, as if one could be ‘value-free’ in making what one thinks is a solely ‘rational’ decision.

Relevant values can be personal, for example favouring treatment over punishment or *vice versa* in a particular criminal legal context; or professional, for example never making hospital recommendations in respect of certain diagnoses which are ‘disliked’.

Conscious awareness and understanding of the likely application of one’s own values (both personal and professional) represent prime means of overriding, and even reprogramming, system 1, so as to maximise

the benefit of, and minimise the harm caused by, undesirable use of the non-rational mental processes.

Values-based decision-making (Loughlin 2014) involves identifying and understanding the issues in a decision that are most important to you. It offers an invitation to be explicit about the (conflicting) values that are in play and how they influence the decisions you take, allowing reflection on how you are weighing conflicting values.

Bias arising from within the relationship between expert and subject

Bias can also be determined by interaction within the relationship between expert and ‘subject’ (the person being assessed), including countertransference experienced by the expert and expressed via,

BOX 3 Heuristic bias: a case vignette

You are a highly experienced expert witness, called on frequently to give evidence in often high-profile criminal trials on the mental states of defendants at the times of their alleged offences. You are usually instructed by the prosecution, and the vast majority of the defendants you determine as not meeting the criteria for a mental condition defence.

You assess a middle-aged man charged with murdering his housemate when apparently psychotic. He looks very much like many such defendants you have assessed previously, and you overlook the apparent lack of any recorded psychiatric history, assuming that you are simply the first psychiatrist to assess him properly. You make a diagnosis of schizophrenia and confirm that his psychotic symptoms are likely to have been present at the time of the alleged offence; however, you then argue that they were not sufficiently severe to found the defence of insanity (because in your interview he was able to demonstrate that he knew that he was killing his housemate and that this was legally wrong) or the partial defence of diminished responsibility (because he had no ‘abnormality of mental functioning that substantially impaired his ability to understand his own actions or to form a rational judgement’).

You are aghast when evidence is then introduced of a report from a defence expert demonstrating that the defendant undoubtedly suffers from an orbitofrontal astrocytoma, which often causes disinhibition and impulsivity. The jury accepts the contention of the other expert witness that the tumour would have substantially impaired the defendant’s ability to exercise self-control, a limb of the test for diminished responsibility that you had entirely ignored. After conviction, the judge criticises you for what she describes as your ‘arrogant and slapdash’ approach, and the defence barrister complains to the General Medical Council about your inadequate professional practice in the case.

(Eastman 2022a)

for example, associative system 1 thinking. Hence, a subject may naturally induce ‘sympathy’ in an expert, or not.

However, such individual factors aside, the ‘traditional professional welfare perspective’ inherent to the practice of medicine may determine that the subject’s legal status, as defendant or litigant, is undermined within the expert’s conception of that person by the dominance of an ethic that tends naturally towards treating legal subjects as ‘patients’. Indeed, the necessity of the expert utilising the same medical techniques in assessing a defendant or litigant as they would use in assessing a patient must make it almost impossible to eschew some aspects of the ethic of care. (The conception of medical expert as ‘not acting as a doctor’ but as ‘being a forensicist’, that is, a professional no longer subject to the usual array of medical ethics, must surely amount to a ‘false professional alibi’, since medical technique and medical ethic are indivisible.) Hence, it is usually unwise for a treating clinician to act also as an expert witness in respect of their patient: see *Vernon v Bosley (No. 1)* [1997], in which Lord Justice Thorpe observed, ‘In the field of psychiatry it may be more difficult for those who have treated the plaintiff [claimant] to approach the case with true objectivity [...] indeed, the necessary relationship of trust between treating clinicians and their patients may be inconsistent with a duty to the court to provide truly independent evidence’; and Lord Hughes of Ombresley, in guidance for advocates (Inns of Court College of Advocacy, 2019).

Bias arising from the adversarial legal process

There are different forms ‘adversarial bias’ (that is, bias arising from the adversarial legal process).

From the fact of instruction by one side

Of particular concern for experts is, or perhaps ought to be, this form of adversarial bias; that is, bias that arises because a party to an adversarial proceeding retains experts to advance its cause. Identifying three sources of this type of adversarial bias, conscious, unconscious and selection, Bernstein (2008) traces all three to the case of *Abinger v Ashton* (1873–74). Hodgkinson & James (2014) refer to three similar varieties – selectorial bias, unconscious partisanship and deliberate partisanship – but acknowledge that there may be more. And Du (2017) classifies expert witness bias into four categories so as to include ‘bias resulting from the position of the expert witness at trial’.

As observed in *Abinger*, ‘undoubtedly there is a natural bias to do something serviceable for those who employ you and adequately remunerate you’.

And clearly, being instructed by one side can be accompanied by the (improper) expression of overt or covert, but objective, pressure on the expert; which should, of course, be resisted. However, whether it is fully resisted or merely only partially (even minimally) resisted may be at issue, with the potential for subtle shifts of emphasis expressed in response to pressure.

The origin of either a conscious or unconscious response to such pressure may be in terms simply of a natural ‘wish to please within a relationship’. Or it may be driven crudely by the wish to be instructed again by the same lawyers and/or by the pursuit of financial gain, likely consequent upon subsequent instruction, which the court recognises as interest bias; that is, where there is ‘an interest, pecuniary, proprietary or otherwise, in the outcome of the case’ (*Peninsula Business Services Ltd v Rees; Peninsula Business Services Ltd v Malik* 2009).

Hodgkinson & James (2014) refer to the impact of selectorial bias, which ‘arises where the litigants (or more usually their advisers) choose as their experts men and women whose opinions are known to support their case’. In this situation there can be no criticism of the expert, who may be expected to give careful and honest evidence. The problem is that the process of selection *per se* tends to lead towards ‘polarisation, with the only opinions advanced being the more extreme views of the spectrum’, ‘so that the court may not hear at all from experts whose views are more moderate or mainstream’. Again as observed in *Abinger*, experts are selected ‘according as their opinion is known to incline’, with the result that the court does not receive ‘fair professional opinion’ from each party’s experts, but rather ‘an exceptional opinion’ from each side.

From the fact of a relationship with a defendant, litigant or lawyer

What creates a particular risk of bias is the expert having some form of relationship with a party to the litigation or that person’s lawyer. This can occur, for example, in clinical negligence cases where a relationship between the expert and the doctor whose practice is at issue, either as the defendant or as an employee of the defendant, exists or previously existed, giving rise to, at the very least, an appearance of bias. For example, in *Thefaut v Johnston* [2017], where there was a relatively small number of surgeons in the specialist field in issue and they tended to know, or know of, each other, the expert’s cross-examination left him sounding defensive, giving the appearance of bias. The judge commented that it would have been far

better for the expert to have got out into the open his personal knowledge of the defendant. Likewise, in *EXP v Barker* [2017] the court's confidence in the independence and objectivity of the appellant's expert was undermined by his failure to disclose that he had a close connection with the appellant, having previously worked with him and co-authored research papers. In contrast, in *LG (AP) v Greater Glasgow Health Board* [2013], the court found that the relationship between litigant and expert was not 'a close or an inappropriate one'.

A similar risk can arise where an expert has developed a relationship with a particular instructing party, such as a firm of solicitors or prosecuting authority. In *Energie Direct Franchising Ltd v Star Gym Ltd* [2018] the court found that, because a significant part of the expert's work was for, or in the gift of, the claimant, the fair-minded and informed observer would be almost bound to conclude that it was probable, or at least really possible, that the expert was biased, whether consciously or unconsciously, by virtue of owing an allegiance to the claimant's lawyer. As observed by Pal (2016), 'where the expert has previously testified for the same law firm (the more the merrier), or has worked for the opposite party in the past, or has a personal relationship with the litigating party or its counsel, is sure to get the jurors' attention'.

Such a relationship can also develop in the course of litigation, especially litigation that is protracted and complex. For example, in *Bates v Post Office Ltd* [2019] one of the defendant's experts was found to have become closely involved in the litigation, taking a partisan view of factual evidence, ignoring one side's factual account, and demonstrating such a lack of balance and fairness that the judge concluded that his expert evidence was not entirely independent.

Even where there may be a laudable wish 'to keep a balance' between being instructed by defence and prosecution, ironically, the wish to do so may result, in an individual case, in the expert consciously or unconsciously yielding to overt or covert, intended or unintended, pressure from the side instructing them on that occasion.

A further potential important source of bias can be expressed in terms of 'winning' and 'losing'. It is perhaps almost inevitable that some aspect of 'wishing to win', rather than being disinterested in the result, will apply to the expert, in that they will likely hope that their opinion will be vindicated, and vindication then becomes identified with the side that instructed them 'winning'. This problem was recognised in *Edwards Lifesciences LLC v Boston Scientific Scimed, Inc* [2017]: 'Rarely, if ever, is an expert witness wholly objective by the time of the trial. Such is the effect of being part of

a litigation team for which the focussed goal is, understandably, winning the argument'. However, the expert should eschew membership of the litigation team and, both explicitly, for example at a conference with counsel, and in the language of their communications with the instructing party, make it clear that they are not a member of the team and their duty is to provide independent and unbiased opinion to the court or tribunal. However, this can be difficult to hold to where necessarily the legal team *also* validly require advice concerning the scientific strengths and weaknesses of an 'opposing' opinion.

As an effect of the adversarial process of inquiry itself

One effect of the use of an adversarial route to determining 'truth', in fact 'a truth' (see above), is that there is a likely tendency for this very process to determine bias not necessarily in terms of 'what opinion' is expressed but 'with what strength'. Hence, the ultimate focus of the adversarial process, expressed within cross-examination, can push an expert more into their corner than they actually are.

Further, the side initially asking the questions of the expert automatically limits the domains of the expert's response and mode of addressing aspects of those domains. That is, the question asked of an expert, and the manner of it being asked, must bear upon the boundaries and manner of expression of the expert opinion offered.

A more general potential driver of bias relates to the lens through which a case is seen. That is, beyond even what questions are asked, and how they are put, the whole manner in which a legal side 'puts its case' can exert a subtle influence on how the expert addresses the individual questions put to them. Within adversarial legal process, the case is presented through two conflicting lenses, and the lens through which the expert is asked to view the case is likely to have some impact on the overall tenor of the opinion they express or on their answers to questions put (see for example *LT v Lothian NHS Health Board* [2018]).

Finally, the location of the 'burden of proof' can influence the expression of expert opinion. If the side instructing an expert bears the burden of proof this will determine a need for the expert to be 'active' in addressing questions; whereas when the burden is on the opposing side then the expert's role is likely more to tend towards the 'passive', or even 'oppositional' (see below). Also, the usual standard of proof, 'on the balance of probability',^b lays ground for the expression of difference by experts instructed by opposite sides where the issue is finely balanced, with the expert called by

^b This applies not only in civil litigation but in most criminal litigation where the expert is called by the defence.

the side on whom the burden of proof rests tending to ‘fall to that side’ and the expert for the other side ‘falling to the other side’.

Routes to the expression of expert witness bias

Potential routes to the expression of bias throughout assessment, report drafting and giving of oral evidence likely include the sources of bias already described (and listed in Box 4). However, there are also some routes that arise from, or are facilitated by, the operation of the adversarial legal process itself.

Conflict between the investigative and adversarial methods

Adversarial legal argument operates on the basis of disaggregation, plus selection and selective emphasis of data. By contrast, medical assessment properly conducted requires an investigative method, admitting all data, weighing all data fairly and coming to a balanced view. However, where medicine is used within an adversarial legal process there is a risk of ‘contamination’ of medical process in both the forming and expression of medical opinion by way of the influence of that adversarial process (this goes beyond, but encompasses, the expert being required to exclude clinically relevant data because it is legally privileged or inadmissible, which is profoundly problematic).

Albeit frank selectivity in regard to data, either from medical records or legal papers, would not only potentially invalidate an opinion but would draw criticism or sanction from the court, as would adversarially ‘arguing of a case’, selectivity can be subtle in terms of ‘relative emphasis’. Nevertheless, it is not unknown for an expert to approach an assessment, or drafting of a report, in terms of ‘constructing a case’, by way of emphasis of particular data or particular interpretation of data.

There is usually legal prohibition of experts expressing opinion on ‘the ultimate legal issue’, but in the expression of expert psychiatric opinion

the dividing line between ‘matters medical’ and ‘issues legal’ can be blurred (so that, in a criminal trial, the expert can effectively become ‘a thirteenth jury person’, including by taking a view on factual matters in dispute or on ordinary inference from facts). And here there is much room for bias to be played out.

Medical rebuttal

Taking the example of the partial criminal defence of diminished responsibility (section 52, Coroners and Justice Act 2009, amending section 2, Homicide Act 1957), since the burden for raising the defence is on the defence, such that it must produce a report that the prosecution may then seek to rebut, there is a risk that the prosecution expert will thereby distort pursuit of unbiased clinical and clinico-legal practice. For example, they might interview the defendant, and consider the medical and legal papers, in terms of the question ‘Does the defence report stack up?’. Most crudely, it is not unknown for a prosecution psychiatrist, having read a defence expert’s report supporting diminished responsibility, not even to carry out their own full medical interviewing and further assessment of the defendant (as they would do in an ordinary clinical context or if they did not have access to the defence medical report), and/or to address whether there is a basis for ‘medical rebuttal’. Although there is a legal obligation for an expert to take an adequate medical history from the defendant, only a change in court practice, and report funding, could avoid the risk that they do not do so, by requiring each side to produce their own expert report ‘unseeing of any other expert report’.

Judicial detection of expert witness bias

Aside from matters already addressed in regard to judicial observation of bias, we list in this section examples of what judges have been known ‘look out for’ in identifying potential bias in expert evidence, and also give some ‘judicial indicators’ of *lack* of bias.

Detecting bias from the expert’s relationship with a party to the litigation

- An expert’s failure to disclose a long-standing connection with the defendant will tend to undermine his evidence (*Bajaj Healthcare Ltd v Fine Organics Ltd* [2019])
- Failure to disclose an association with the appellant (*EXP v Barker* [2017])
- Sharing many experiences with the defendant does not place the expert well to give convincing independent expert evidence on his behalf (*Baldwin v Dodds* [2009])

BOX 4 Routes to the expression of bias

Conflict between the investigative and adversarial methods:

- failure to maintain ‘investigative medical process’
- adopting ‘adversarial medical process’
- ‘selectivity’ via relative emphasis
- ‘constructing a case’
- opining on the ultimate issue
- Medical rebuttal

Detecting bias from the expert's methodology

- Overreliance on the claimant's account of his symptoms, and not appropriately questioning the account when it was contradicted by other independent evidence (*KCR v The Scout Association* [2016])
- Evidence being affected by subconscious bias in selecting materials for review (*Teva UK Limited v AstraZeneca AB* [2014])
- The expert becoming 'an advocate for the petitioner', with 'assessments subject to cognitive bias and/or observational bias', 'with method not structured to minimise bias' and 'the application of "clinical judgment" to interpret the findings as a potential source of bias [so being] a servant of the methodology' (*ISA v Angus Council* [2012])

Detecting bias from criticism of other experts

- Suggesting that the other expert has got it wrong because they were not viewing it from an independent point of view, interpreted judicially as: 'a truly independent expert would not be expected to make such an unfounded assertion' (*LT v Lothian NHS Health Board* [2018] CSOH 29)

Detecting bias from the expert's approach to evidence

- Making no reference to a range of reasonable opinion and not addressing evidence that detracts from their opinion (*Agro Invest Overseas Ltd v Stewart Milne Group Ltd* [2018])
- Reticence in accepting, or refusal to accept, one party's evidence – taking a partisan view on evidence of fact (*Bates v Post Office* [2019])
- Rejecting evidence inconsistent with the case as put by the instructing party (*Hanbury v Hugh James Solicitors* [2019])
- Willingness to accept material said to have come from another expert without verifying the source or the context (*Arroyo v Equion Energia Limited* [2016])
- Excluding data in the knowledge that they are material to the (other side's) case, 'which cannot have been accidental where the expert knew sufficient of the Claimants' case to understand their materiality' (*Arroyo v Equion Energia Limited* [2016])
- Citing a research paper not in terms of its conclusion, but for some nugget within it which might offer support, i.e. misstatement by omission (*Squier v General Medical Council* [2016])
- Failure to acknowledge or address in the reports any factors or assumptions that might be regarded as favourable to the opposing litigant (*McGlone v Greater Glasgow Health Board* [2011])

Detecting bias from the expert's choice of language

- Criticism of another expert using 'alarmist' or 'extreme' language (*LT v Lothian NHS Health Board* [2018])

Detecting bias from the expert's appearing to adopt the role of advocate

- Expressing a decision to become 'involved', suggesting assuming the role of advocate (*LT v Lothian NHS Health Board* [2018])
- Offering a report not based on the expert's own knowledge or expertise, and so amounting to little more than a presentation of arguments supplied to him by the instructing side, thus '[allowing] himself to be used as a spokesman for the party by whom he is engaged' (*Test Claimants in the FII Group Litigation v The Commissioners for Her Majesty's Revenue and Customs* [2014])
- Showing an inappropriate willingness to argue the defendant's case in the witness box (*Baldwin v Dodds* [2009])
- '[Seeming] to see being labelled as an "advocate" for a cause as being [merely] an occupational hazard' of the expert witness (*Little v Glen* [2013])

The expert's response to cross-examination

- Showing reluctance to engage in the exercise of cross-examination (*McCreery v Letson* [2015])
- Willingness to try to explain away inconsistency with his own evidence (*McCreery v Letson* [2015])

Indicators of lack of bias

- Willingness to accept the possibility of error (*Anglian Water Services Limited v The Commissioners for Her Majesty's Revenue & Customs* [2017])
- Finding it possible to make appropriate concessions where their honest views require agreement with a point being put by counsel (*Edwards Lifesciences LLC v Boston Scientific Scimed, Inc* [2017])
- Referring to factors favourable to the other side and to factors unfavourable to their own side; also willingness to accept counter-arguments (*McGlone v Greater Glasgow Health Board* [2013])

How can bias be minimised? (Box 5)

Clinico-ethico-legal insight as the foundation

It is wise to start with recognition that 'objectivity' is impossible to achieve, even though its pursuit should be the goal. However careful may be self-monitoring, there will always be unrecognised bias. Hence, a detailed understanding of the potential sources and routes to expression of bias, plus self-

BOX 5 Minimising bias

- Clinico-ethico-legal insight
- Pursuit of honesty
- Recognition of the impossibility of objectivity
- Identification of one's own values and their likely impact
- Self-reflection
- Fine-grain critiquing of one's decision-making process in terms of:
 - use of 'associative' system 1 and 'rational' system 2 thinking
 - use of heuristics
 - addressing foundations of alternative opinions
- Correcting influence of 'heuristics' by overriding system 1 with system 2
- Avoiding pretending to be 'unbiased'
- Peer review

reflection and 'pursuit of honesty', are probably ultimately the best safeguards, pursued through fine-grain critiquing of one's own method at every stage of assessment, report writing and giving of oral evidence. That is, crucially there must be pursuit of ethical insight and honesty. Clarity in defining and operating a given form of reflective process offers the best protection against the unrealised operation of personal bias within practice.

Hence, the expert should address within a case the following questions:

- Have I identified what of my own values and beliefs I am likely to have applied, how and to what extent?
- Have I considered the extent to which I have likely applied system 1 associative heuristics rather than system 2 rational thinking? (see also below)
- Have I addressed alternative opinions, and why I do not favour them (and might the latter lie in my own personal values, and/or in heuristics)?
and especially:
- Do I have some sort of personal interest in the case, or very specific personal values and beliefs that could bias me?
- Am I 'riding a personal hobby-horse'?
- Am I at risk of pretending that I am *unbiased*?

Correcting heuristic bias

A crucial question is how one should attempt to override or reprogramme system 1 in favour of system 2. So always mentalise about your thought processes. Ask 'What cognitive steps have I taken?', 'Why do I think what I now think?'

And recognise that anxiety and stress increase the chance of relying excessively on system 1 short cuts. So, approach important tasks in as relaxed a state as possible; minimise the likelihood of interruption; ensure that the time available is adequate to the task; recognise mood states in yourself that will tend to reduce cognitive capacity, or affect perception of values or weighing of evidence; accept that uncertainty is inevitable in most decision-making, and do not seek to drive it out (which will lead to false certainty and overconfidence) (see Eastman 2022a).

Peer review

All of the foregoing also emphasises the need for peer review. By contrast, practising 'alone' must always carry the risk of 'baseline drift', that is, tending towards a particular approach to cases and/or side (to be a member of the Home Office List of Forensic Pathologists a practitioner must practice within a group, explicitly to avoid this risk). The model of 'medical chambers' provides a natural, and often robust, forum for *ex post* peer review, as can other professional peer group meetings.

Non-peer review

Feedback from lawyers is very useful concerning aspects of 'efficiency' and clarity of expression, including relevance to the legal questions in terms of clinico-legal mapping. However, it is likely intrinsically to be based at least partly on whether they perceived that your report aided their side's case or not, and as such may well itself be biased. Hence, the Royal College of Psychiatrists' Multi-Source Assessment for Expert Psychiatric Witnesses (MAEP) system (www.rcpsych.ac.uk/improving-care/ccqi/multi-source-feedback/maep) includes provision for feedback from the other side's lawyers and experts, which may also be biased in the opposite direction, so that at least there is a potential for such biases to balance out.

So, peer review, whether it be pursued in regard to individual cases or in aggregate terms through multisource feedback, can only be applied validly by inclusion of major input from other psychiatrists who are engaged in similar work.

Conclusions

Be aware that within an adversarial legal context both the questions asked of an expert witness and the adversarial route to using or challenging the answers given are naturally in conflict with the investigative medical method. Crucially, the expert should perhaps modify the lawyerly quotation given at the outset of this article to read 'If I ever thought I'd managed to be an impartial witness I'd be deluding myself'.

MCQ answers

1 d 2 d 3 b 4 c 5 d

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At the time that we were drafting this article, Dr Chris Pamplin, the Editor of the newsletter of the UK Register of Expert Witnesses, *Your Witness*, was also addressing the issue of expert witness bias (Pamplin 2020). We have incorporated his definition of ‘anchoring’ bias. We are indebted to Dr Sean Whyte for his drafting of aspects of Eastman (2022a) that address system 1 and system 2 thinking and which are rehearsed here.

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N.E. was responsible for the overall structure of the paper and argument, K.R. carried out and reported upon the detailed legal case research.

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MCQs

Select the single best option for each question stem

1 Concerning expert witness bias:

- a it is defined similarly legally and psychologically
- b it has no defined legal meaning
- c confirmation bias has not been judicially recognised
- d it is inevitable
- e it is the same as lack of independence.

2 Which of the following types of bias has not been judicially recognise?

- a hindsight
- b confirmation
- c deliberate
- d system 1
- e selectorial.

3 Concerning the types and sources of bias:

- a emotion plays no part
- b system 2 thinking can constrain system 1 thinking
- c they originate only via heuristics
- d hindsight bias and outcome bias are identical
- e they are derived solely from one's values.

4 Adversarial bias:

- a arises solely from being instructed by one side
- b occurs mainly through cross-examination
- c can arise through legal process
- d is best avoided by sticking to your position under cross-examination
- e necessarily arises from conflict between the medical and legal method.

5 Expert witnesses can best minimise bias in their practice by:

- a preparing reports in a group
- b regular feedback from lawyers
- c ensuring that they only use system 2 thinking
- d self-critique
- e avoiding the influence of their own values.