Judicial Decision-Making and "Outside" Extra-Legal Knowledge
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Justice Peter Applegarth

How do judges and other judicial decision-makers acquire and use knowledge that is not part of the factual record before the court?

Courts are required to determine issues such as:

- how a victim of long-term domestic violence would reasonably respond by way of self-defence to a threatened assault;
- how a reasonable occupier of land would respond to a foreseeable risk of personal injury;
- what is in the best interests of a child in terms of access to parents; and
- the apparent purpose of a commercial contract.

Some matters are the proper subject of "judicial notice".[1] In addition, judges are required to bring their experience and knowledge of the world to the process of decision-making. They adopt "common sense" assumptions about how the world works. Judges are encouraged to "get out of their ivory towers" and learn about the world. They read articles that are sent to them by friends, colleagues and librarians, or which they encounter in their general reading, about topics like domestic violence, indigenous incarceration, parole, sexual abuse and demographic changes in Australian society. In addition to reading about these matters, judges are encouraged to attend conferences on these and many other social issues. Scientists and social scientists are invited to attend judicial conferences, where we learn about matters such as infant and adolescent brain development.

There is an element of self-selection in how we acquire knowledge about society. A judge who listens to Geraldine Doogue and Phillip Adams on ABC Radio National may have a different view of the world to one who listens to Ray Hadley on 2GB or tunes in to Andrew Bolt. What we know about issues depends upon what we choose to read and listen to, and the selection of information which seems to be reliable and current.

Having acquired knowledge outside the courtroom about how the world works, how are we supposed to use that knowledge? What obligations do we have to tell parties about our knowledge? These are some of the issues explored in a special issue of the *Griffith Law Review* about judicial decision-making and "outside" knowledge.

[1] The doctrine of judicial notice is a narrow exception to the general rule that the facts in a case must be proved by evidence. In simple terms, under the common law judicial notice may be taken of facts which are indisputable. Uniform evidence statutes allow, in some situations, judges to take account of "knowledge that is not reasonably open to question".

In many instances, there are factual gaps in the record of evidence. To take the simple example of a personal injury case, there may be no evidence about the mechanism of a whiplash injury or the usual course of recovery from such an injury. However, judges may be expected to know these things because of their experience in another case, either when they were in practice or as a judge. It makes sense, and saves costs, to not require proof in every case of such commonplace matters about which a judge is expected to know. There may be no dispute about the physics or the medical science. However, outside these areas, judges, through lack of experience or reading unrepresentative or unreliable materials, may make erroneous assumptions about matters such as:

- psychological illnesses like post-traumatic stress disorder and their resolution;
- the behaviour of victims of child sexual assault;
- the prospects of someone aged over 50 gaining employment after a long period of unemployment; and
- the efficacy of a form of knee surgery.

Assumptions about these matters may be unreliable. To take the example of knee surgery, a judge may know a number of people who have undergone a specific form of surgery, and that 80 per cent of those people seem to have benefited from it. That success rate may be very different from figures which would be given by experts in a case, based on their personal knowledge of such procedures. In turn, the figures given by experts in the case founded upon such a knowledge base, may be very different from rigorous, clinical studies which are accessible via the Cochrane Collaboration. Still, it would be wrong for a curious judge, without reference to the parties, to sneak a peek by doing an internet search to find out what the Cochrane Collaboration reports.[2] A judge is not entitled to obtain information on any contentious matter, even from "works of authority", without giving the parties the opportunity to controvert or comment upon the work to which reference has been made.[3]

Suppose a judge informs the parties of an intention to consult authoritative studies about knee surgery which are accessible via the Cochrane Collaboration, and the parties object to such a course. What use should be made by the judge of knowledge gained from other cases or anecdotal evidence from acquaintances at the golf club?

A couple of years ago I spent a week in Toowoomba and each day sentenced a number of drug offenders, mostly for street-level dealing in methamphetamine. On the Friday evening as my Associate and I drove back to Brisbane she asked me "Judge, is everyone in Toowoomba on meth?" My immediate response was "I don't think my Auntie Violet is". I first met Auntie Violet in the early 1960s when I was an infant. Her daughters, who were distant cousins, rode ponies. For a long time I assumed that most children in Toowoomba rode ponies. My Associate's over-estimation of the number of Toowoomba citizens who use meth, like my

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2 In *Cavanett v Chambers* [1968] SASR 97 at 102 Bray CJ stated: "It would be preposterous to suppose, for example, that in a claim for damages … where divergent medical opinions have been expressed by expert witnesses on each side, the Court should be at liberty without consent to pursue independent inquiries of its own on the point through medical journals or text books not referred to by the witnesses."

3 J D Heydon, *Cross on Evidence* (Lexis Nexis, 2014) [3035].

childhood over-estimation of the number of Toowoomba children who rode ponies, is what scholars describe as an availability heuristic. The scholarship in this area can be traced to Tversky and Kahneman's seminal 1974 article *Judgment under Uncertainty: Heuristics and Biases*.[4] That article described simplifying shortcuts of intuitive thinking and explained some 20 biases. In simple terms, the availability heuristic is the process of judging frequency by the ease with which instances come to mind.

In *Judges, 'Common Sense' and Judicial Cognition,* Dr Burns explains the availability heuristic and other ways of thinking which produce systemic errors in decision-making.[5] Human judgments are often based on memory. If we do not have the necessary information to make a decision, we use information acquired in the past that we think will help us make a decision. However, this process can lead to incorrect assumptions, for example a wrong assumption about the frequency of an event based on how many similar events are brought to mind. Judges, like everyone else, are more likely to draw on information that can be easily called to mind. Based on the judge's limited experience and lack of knowledge, erroneous assumptions may be made about a group whose behaviour is under consideration, for example, the behaviour of the victims of domestic violence or childhood sexual abuse. Also, like other people, judges may over-estimate the chance of something occurring because of their experience or exposure to media reports.

The availability heuristic suggests that people tend to think a risk is more serious if it can be readily called to mind. A terrorist attack in Paris or London that attracts media coverage will alter your feelings about the safety of visiting that city, and cause you to change your travel plans and go scuba diving in Fiji instead. Media reporting of divorces among Hollywood celebrities leads us to exaggerate their frequency.[6] Another example given by Kahneman is that strokes cause almost twice as many deaths as all accidents combined, but 80 per cent of respondents to a survey which considered pairs of causes of death judged accidental death to be more likely. Tornadoes were seen as more frequent killers than asthma, although the latter caused 20 times more deaths.[7]

Closer to home, my knowledge and beliefs about plaintiffs in personal injury cases may be based largely on the fact that I hear, on average, one or two personal injury trials each year. Based on that experience, I may assume that 80 per cent of personal injury plaintiffs are untrustworthy in their evidence and malingerers. Alternatively, I may conclude, based on my experience over the last five years, that 80 per cent of personal injury plaintiffs are stoic and tend to understate the effect of injuries. But my conclusions, based on such a small sample, would be unrepresentative of the personal injury matters that go to trial in the District and

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4 Amos Tversky and Daniel Kahneman, 'Judgment under Uncertainty: Heuristics and Biases' (1974) 185(4175) *Science* 1124, 1127-1128. This article also can be found as an appendix to Kahneman's bestselling work *Thinking, Fast and Slow* (Penguin, 2011).

5 Kylie Burns, 'Judges, 'common sense' and judicial cognition' (2016) 25(3) *Griffith Law Review* 319.

6 Daniel Kahneman, *Thinking Fast and Slow* (Penguin, 2011) 130.

7 Ibid 138.

Supreme Courts, and be even more unrepresentative of the extremely high percentage of personal injury cases that never go to trial.

To take a different perspective, suppose I have heard ten personal injury trials in the last five years, five of which were defended by Compulsory Insurer A and five defended by Compulsory Insurer B. Of the five defended by A, the plaintiff comfortably exceeds A's offer to settle in only one case. Another plaintiff just exceeds A's offer, and in three out of the five cases the plaintiff is awarded less than A's offer and in each of those cases is ordered to pay A's costs. By contrast, in the five cases defended by B, the plaintiffs always do better than B's offers to settle, usually much better. Based on that experience I might infer that Insurer A is better than Insurer B at assessing and resolving claims. But that experience may be unrepresentative of the "claims performance" of A and B across all trials or across all personal injury claims. It may happen that the cases which I heard which were defended by Insurer B were the result of one incompetent claims manager in that company, whose incompetence had since been detected, or just bad luck. Overall, Insurer B may be much better than Insurer A in assessing claims, negotiating settlements and successfully litigating claims that are not settled.

The point is that I should not be basing any conclusions about plaintiffs or insurance companies in personal injury cases upon the last five or ten cases that have come to trial before me. However, to not do so requires me to overcome the availability bias to which we are all subject.

Many judges and tribunal members do not do five similar cases in five years. They often do at least five similar cases a day, every day, for years. One thinks of high-volume courts and tribunals, such as the Social Security Appeals Tribunal, the Mental Health Review Tribunal, small claims tribunals such as the jurisdiction exercised by QCAT and high-volume cases in the Magistrates Court involving low-level drug offences or public nuisance cases. An individual who constitutes such a court or tribunal may say "I've done hundreds of cases like this one over the years". They may have the same kind of confidence, based on experience, as an orthopaedic surgeon who says "I've assessed hundreds of suspected childhood wrist fractures over the years and I know when a child's wrist is fractured".

A veteran of small claims tribunals may say "I've done hundreds of these cases over the years and I've learned that Gold Coast real estate agents who wear white shoes and are draped in gold chains tend to be unreliable witnesses. In 80 per cent of cases that involve such witnesses, I reject their evidence". Let us suppose that there was some process that could independently verify that outcome, based upon confirmation through reliable contemporaneous documents, or some process by which one would have the equivalent of second, third and fourth independent assessments. Suppose that there could be a high degree of assurance that 80 per cent of white shoe wearing, gold chain exhibiting Gold Coast real estate agents could not be relied upon. One would still be left with the task of deciding in an individual case whether a witness, with those characteristics, is among the 20 per cent who give truthful and reliable evidence. However, the appearance of a witness wearing white shoes and bearing gold chains makes it hard to not lump that witness into the stereotype. The problem is not unlike a busy GP who has treated six cases of the flu that morning and who then sees a patient who has some

or all of the symptoms of the six flu sufferers. The busy GP is inclined to assume that this patient also has the flu, even though the symptoms may be consistent with some other illness or disease.

I suspect that forensic psychiatrists have a harder job in diagnosing mental illness and making assessments of the risk of sexual offenders reoffending than a GP has in deciding whether someone has the flu. However, whether we are talking about a forensic psychiatrist or a suburban GP, the lesson which the research teaches us is that the availability heuristic affects all forms of decision-making.

It is very easy, particularly for experienced and confident people, to say "I've seen this type of case before, I know what the problem is and I also know the solution".

Confidence

It interests me when I hear personal injury cases and expert witnesses, such as orthopaedic surgeons and psychiatrists, express opinions about the plaintiff's prospects of recovery. Often expert witnesses express opinions about such matters with great conviction. I am surprised by the confidence with which they express their opinions, especially when the plaintiff has been seen once or twice by the expert for the purpose of obtaining a medico-legal report and where, it seems, that the experts do not follow up the cases in which they make such predictions. The factual basis upon which experts in these areas make predictions about the probability of improvement or deterioration is not often stated or explored. I infer that it is based, in part, on their past experience in treating similar cases. But I wonder how many cases they treat, and how representative those cases are of the case at hand. Substantial experience in treating many cases may not be as reliable a basis for prediction as high-quality, epidemiological studies.

Confidence is a highly misleading guide to accuracy in decision-making.[8] Kahneman suggests that confidence in a decision arises from the ease with which an answer comes to mind, coupled with a sense that the information relied upon to answer the question is coherent.[9] But "ease and coherence" do not guarantee that a belief held with confidence is true.[10]

Guthrie, Rachlinski and Wistrich, whose work in this field is highly influential, applied this learning in administering a Cognitive Reflection Test to Florida judges. They reported that the judges who answered certain questions incorrectly, but gave the intuitive answer, were more likely to report that the questions were easy than judges who answered correctly.[11] Their

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8 Emma Cunliffe, 'Judging, Fast and Slow: Using Decision-Making Theory to Explore Judicial Fact Determination' (2014) 18(2) *The International Journal of Evidence and Proof* 139, 160 n 85.

9 Ibid 160 n 86.

10 Kahneman, above n 6, 239.

11 Chris Guthrie, Jeffrey Rachlinski and Andrew Wistrich, 'Blinking on the Bench: How Judges Decide Cases' (2008) 93(1) *Cornell Law Review* 1, 16.

research tends to confirm the view that one sign of expertise on a given task is having the capacity to identify the question as one that requires more careful thought.[12]

Researchers have compared fields of expertise in which experts seem to perform well and fields in which experts "seem incapable of performing much better above the level of novices".[13] The literature is summarised in Cunliffe's article *Judging fast and slow: using decision-making theory to explore fact determination*.[14] Experts who perform well include weather forecasters, livestock judges, astronomers, chess masters and physicians. Those who perform poorly include clinical psychologists and psychiatrists (when predicting long-term success for a patient). Prolonged practice is important, just as prolonged practice is important in a sport. However, the research indicates that practice is effective when the environment offers "rapid and accurate feedback".[15] Therefore, a medico-legal expert who makes erroneous predictions about recovery or risk is unlikely to have their confidence shaken if they are unaware of the extent to which their predictions are falsified.

In summary, the literature on decision-making suggests that confidence is a poor guide to expertise and that, in some situations, excessive confidence based on experience creates problems because the decision-maker is "disinclined to check the validity of his or her conclusions".[16]

Reliance on experience

Judicial decision-makers are expected to make decisions based on knowledge gained through experience as a lawyer or a judge. However, care is always required to ensure that knowledge gained through experience is not used without reflection and unfairly in another case. For example, a judge may have had 20 years' experience at the Bar in building cases and, on the basis of that experience, feel confident that he or she knows how parties to building contracts behave. However, most of the judge's experience may have been in major building projects about mines, motorways and very tall buildings. That experience may not easily translate to understanding the commercial expectations of parties to a residential building contract, and it may have very little application in some different contractual context such as a contract for the sale of goods.

We face the problems of excessive reliance on personal experience and that much of our knowledge about how the world works is based on highly contestable information.

Given these problems, one would expect the law to facilitate the efficient reception of extra-legal knowledge which would either support, qualify or contradict certain assumptions.

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[12] Cunliffe, above n 8, 160 n 88 citing Daniel Kahneman and Gary Klein, 'Conditions for Intuitive Expertise: A Failure to Disagree' (2009) 64 *American Psychologist* 515, 516.
[13] Ibid 161 n 93.
[14] Ibid 162-3.
[15] Ibid 162 n 100.
[16] Ibid 163.

However, as the editors of this special part of the *Griffith Law Review* point out, across the common law world, there are "inadequate (and often unclear) legal frameworks which govern the admission and evaluation of outside knowledge".[17] Individual cases do not necessarily provide reliable outside knowledge to courts. Even in cases in which expert witnesses give evidence, there may be an imbalance between the parties with an expert only being called by one party. The evidence of the expert may be inadequately challenged because the other party cannot afford an expert or a good lawyer. The evidence of the expert witness may not reflect the true state of outside, specialised knowledge.

Framework evidence

Recurrent issues confront courts and tribunals, which have to await the reception, in a suitable case, of expert evidence of general propositions of fact, which are sometimes called "social frameworks" or "empirical frameworks".[18] Professors Hamer and Edmond give the example of the framework evidence concerning the behaviour of the victims of child sexual assault generally, and whether it was consistent with the assault having taken place for the complainant to delay making a complaint and continue an apparently close relationship with the alleged perpetrator. The question arises as to what happens when another case comes along which raises the same issue. Is a judge sitting without a jury or a Magistrate entitled to have regard to the framework evidence which was adduced in another case? Is a judge entitled, in directing a jury, to instruct it about possible explanations for delay by a complainant in a child sexual offence case, based upon the judge's knowledge of such framework evidence, given in another case? Does the judge have to wait until the framework evidence is accepted as authoritative by an appellate court? Does it have to achieve the status of a matter about which judicial notice can be taken?

To take a different example, a woman charged with murdering an abusive husband relies upon a defence of self-defence. She waited for her husband to go to sleep, and then used a weapon to kill him. I heard such a case many years ago and had the advantage of hearing two highly-qualified expert witnesses about the effects of long-term violence and how it may affect a woman's perception of risk and other available means of escaping violence. But another judge in a similar, pending case may not expect to receive such expert evidence.

Professors Hamer and Edmond pose the following questions about the absence of such social framework evidence in a particular case:

> "If it appears the defence is not going to [call an expert to address these issues] on their own initiative, should the judge be permitted to suggest it? This appears sensible, but it would be contrary to the adversarial principle of party presentation. Given that the trial judge has been exposed to this material in the past, should the

[17] Kylie Burns, Rachel Dioso-Villa and Zoe Rathus, 'Introduction: Judicial decision-making and 'outside' extra-legal knowledge: breaking down the silos' (2016) 25(3) *Griffith Law Review* 283, 283.

[18] David Hamer and Gary Edmond, 'Judicial Notice: beyond adversarialism and into the exogenous zone' (2016) 25(3) *Griffith Law Review* 291, 306.

> trial judge be permitted to revisit the seminar papers and also to check the latest literature? Again, allowing the trial judge to do case-specific reading rather than simply drawing on background knowledge appears contrary to the adversarial principle. However, one has to question the value of a principle that prefers reliance on vague memories of literature read in the past over fresh reference to current research. One consequence may be that the judge is tempted to carry out research during the trial without revealing it, with a consequential loss of transparency. Of course, complete transparency about past influences is impossible, but this is a further reason to encourage judges to update their knowledge, provide current references, and give the parties the opportunity to respond and engage."[19]

Judges who become aware of research

The article *A Little Ignorance Is a Dangerous Thing: Engaging with Exogenous Knowledge Not Adduced by the Parties* focuses upon a Canadian criminal case in which the defendant faced a break and enter charge. I adopt, with permission, the editors' summary:

> "The crucial evidence which convicted the accused was 'a single latent fingerprint found on plastic wrapping' within the premises. After the evidence had been finalised but while the decision was reserved Funk J, the trial judge, became aware of research and reports which were critical of some aspects of the methodology employed by the expert witness who had given the fingerprint testimony. The judge provided copies of the material to the prosecution and defence and reconvened the court so that submissions could be made and ultimately acquitted the accused. As permitted in Canada, the prosecution appealed and the Court of Appeal strongly disapproved Funk J's approach, opining that 'the judge stepped beyond his proper neutral role and into the fray'."[20]

Transparency

Reliance upon experience and knowledge gained from outside sources presents a range of issues, including issues of natural justice or fairness. In *Aytugrul* [21] the High Court considered the use by the Chief Judge at Common Law, when sitting in an appeal court, of psychological studies. The material and its conclusions did not seemingly meet the requirements for judicial notice. In any case in which potentially contentious material may be relied on, a question arises about the need to give parties an opportunity to make submissions so as to ensure that a party is not unfairly prejudiced by the decision-maker taking into account "knowledge" of that kind.

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19 Ibid 312.

20 Burns et al, above n 17, 287 in reference to Gary Edmond, David Hamer and Emma Cunliffe, 'A little ignorance is a dangerous thing: engaging in exogenous knowledge not adduced by the parties' (2016) 25(3) *Griffith Law Review* 383.

21 *Aytugrul v The Queen* (2012) 247 CLR 170 at 184 [21], 203 [74].

These cases raise concerns about research being undertaken by judges in the absence of clear processes for testing the validity, quality or possibly controversial nature of the research materials that are located. The information sourced by the judge may be out of date, unrepresentative of the body of expert learning in the area, or simply wrong. Transparency is important.

Some areas of the law encourage the reception of knowledge gained from the social sciences. Understandably, family law judges often turn to social science in deciding some issues, such as those relating to parenting provisions in the *Family Court Act*. Zoe Rathus' article maps the use of social science in family law. She observes that in most cases there is no apparent legal process or procedure for the introduction of the materials. This raises concerns about natural justice. After 2006 the active use of social science literature became a ground of appeal in a number of children cases. After that, reference to social science literature declined. Rathus observes:

> "It seemed that trial judges were reining in their overt engagement with social science literature in response to appellate authority. However, it is not possible to tell the extent to which the social science literature was just rendered invisible by judges not naming their sources of information. A different research project would be required to identify the extent to which recognisable language and ideas from specific literature continue to be used in the cases. Many of these ideas and concepts are likely to be useful to decision-making, however, their *silent* use creates a new manifestation of lack of natural justice."[22]

The idea of judges, without reference to the parties, undertaking independent research, including scientific and social science literature reviews, offends our legal system's commitment to the "adversarialist principle of party presentation".[23] In addition, judges by their training and experience are ill-equipped to undertake such research and to interpret certain materials in highly specialised fields. However, judges are expected to bring outside knowledge to bear on the resolution of certain issues and, in fairness, to disclose to parties the fact that they have acquired certain knowledge from some outside source, such as a previous case or in a paper presented at a conference. Contrary to the position adopted by the Canadian Court in *Bornyk*[24], there seems nothing wrong in principle with a judge raising a concern with the parties, based on identified outside information. To not raise such concerns risks a decision being subtly affected by such knowledge, without giving the parties the opportunity to explain that the "knowledge" is incorrect, incomplete or irrelevant.

If parties are given the opportunity to make submissions about such outside knowledge, they may be ill-equipped to take the opportunity to question, let alone successfully challenge, the outside information. A party may lack the resources to do so. A legally aided client may not

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[22] Zoe Rathus, 'Mapping the use of social science in Australian courts: the example of family law children's cases' (2016) 25(3) *Griffith Law Review* 352.

[23] Hamer and Edmond, above n 18, 291.

[24] *R. v. Bornyk* 2015 BCCA 28.

obtain a grant of aid, especially in the middle of a trial, to engage expert advice and the benefit of an expert witness. A self-represented party, who cannot afford a lawyer, is unlikely to be able to afford an expert to review, and possibly challenge, the evidence to which the judge has pointed.

An unclear legal framework

This special part of the *Griffith Law Review* highlights how unclear our legal frameworks are which govern the admission and evaluation of outside knowledge. Our system operates on ill-defined rules about the legitimate use which a judicial decision-maker may make of knowledge derived from experience, including the experience of hearing evidence in other cases, without disclosing their intention to do so to the parties. The line between legitimate use and unfair or improper use is hardly clarified by describing certain kinds of information as "background information".[25] Moreover, it seems odd that, subject to the obligations of affording natural justice, a judge can rely upon general knowledge gained from an expert's presentation at a conference at which the judge attended, but another judge, who was unable to attend the conference, is not permitted to access the paper, about which a colleague has told him or her, in preparation to hear a case.

There are many sound reasons why the principle of party presentation should predominate. One is the cost burden upon parties to litigation having to address irrelevant information or misinformation identified by a judge who has undertaken some misguided research on the internet. A little bit of knowledge may be a dangerous thing. However, the limited scope to receive outside information under the doctrine of judicial notice strongly supports the argument advanced by Professors Hamer and Edmond for some relaxation on the strict application of the principle of party presentation. Such a relaxation may be justified in the interests of factual accuracy, efficient dispute resolution, fairness and institutional integrity.[26]

If the legal framework governing judges relying upon outside knowledge is unclear, then the position governing tribunals is shrouded in fog. Tribunals are required by legislation to conduct hearings fairly, quickly and efficiently and, often, are not bound by the rules of evidence. Considerations of efficiency and minimisation of costs, and the greater scope which tribunals may have to inform themselves about matters, may encourage a more liberal view about the ability to transport knowledge gained from one case to another. However, a similar requirement of fairness applies to the member of a tribunal of giving the parties notice of the information of which the tribunal member is aware and the opportunity to make submissions about it.

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[25] Categories abound in this area. There is a distinction made in the case law and the literature between "adjunctive facts" and "legislative facts": Heydon, above n 3, [305]. However, scholars have suggested that other categories, such as general factual propositions or frameworks, occupy a middle ground between these two categories: see Hamer and Edmond, above n 18, 206 where the scholarship is discussed. Judge Posner has added to the traditional categories, "background facts" (being facts designed to increase the reader's understanding of a case by placing the adjudicative facts in an illuminating context), "colouring book facts" and visual aids: these categories are discussed in Heydon, above n 3, [3310].

[26] Hamer and Edmond, above n 18, 291.

There are obvious dangers in permitting judges and other judicial decision-makers to undertake research about general factual matters which may affect a decision. These include the research skills required to gather a range of authoritative articles on a particular topic and the skill required to properly interpret research, including scientific material and statistics.[27]

What is to be done?

One institutional or procedural change that could assist judges and other judicial decision-makers to access reliable sources of information would be the development of reliable empirical information by dedicated research services, court libraries or research bodies. Naturally, this material would need to be available to all parties prior to a hearing so as to accord natural justice and give the parties the opportunity to challenge the material. As Dr Burns notes, Benchbooks have been widely used by Australian courts for many years to provide background information to trial judges.[28] This includes helpful material in equal treatment bench books. The *Equal Treatment Benchbook* developed by the Queensland Supreme Court, particularly through the efforts of Justice Roslyn Atkinson, was a first of its kind. However, it is questionable whether some of the research material upon which such bench books are based would satisfy the very rigorous requirements of judicial notice. The material may reflect widely-accepted views about matters such as the use of language by certain witnesses. However, some of the material may not be beyond dispute or constitute "common knowledge". In addition, Benchbooks, whether they relate to matters such as DNA or domestic violence, need to be current and reflect advances in knowledge.

Intuitive decision-making

I return to the topic of intuitive reasoning and the fact that our system, in the interests of efficient dispute resolution, requires judges and other decision-makers to make common sense assumptions about the way the world works. Aided by framework evidence in other cases, factual and expert evidence in the case at hand, matters which are the subject of judicial notice and knowledge gained through experience, decision-makers make certain common sense assumptions. It may be an assumption about how a consumer would interpret a warning label on an opaque bottle of ginger beer. It may be an assumption about how, and to whom, the teenage victim of a sexual assault or domestic violence would be expected to complain.

Time-poor judges and tribunal members, like time-poor GPs, use intuition in making decisions. They cannot be expected to do otherwise. However, reliance on intuition and assumptions may be misplaced. The assumptions may be based upon inaccurate or outdated information. In cases in which courts and tribunals do not have the time or the information to carefully assess complex issues, such as the risks posed by releasing an alleged domestic violence offender on

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[27] See Alysia Blackham, 'Legitimacy and empirical evidence in the UK courts' (2016) 25(3) *Griffith Law Review* 414 at 425-6 about the UK Supreme Court's alleged misunderstanding of statistical principles and epidemiological evidence.

[28] Burns, above n 5, 341-2.

bail, they are likely to rely on assumptions about risk based upon anecdotal evidence and their own experience. The assessment of risk in such circumstances may greatly over-estimate or under-estimate the risk which would be assessed by a fuller, more informed and more expensive process.

In all walks of life we rely upon intuitions. If you are walking to the train station in the dark an encounter a stranger, you will have an intuition about the risk which that stranger poses to your personal safety. Likewise, in judicial reasoning, many common sense factual assumptions broadly accord with reality. It would be counter-productive and costly to require parties to prove all of these things by admissible evidence. The cost of doing so could not be justified. In many contexts, ordinary human experience will accord with science. The real challenge is to know the circumstances in which it is inappropriate to rely upon assumptions about the way the world works, including how individuals of whom we have little personal experience behave.

Interrupting intuitive thinking based on substitution and stereotypes

We must face the fact that judicial decision-makers, like medical specialists and busy GPs, are human beings who make intuitive decisions. As Dr Burns points out "We need to accept that intuition will always be a part of judicial reasoning and in many cases may be both an accurate and efficient approach to judicial fact finding". She notes:

> "Guthrie, Rachlinski and Wistrich have argued that eliminating all intuition from judicial decision-making is both impossible and undesirable because it is an essential part of how human brains function. **Intuition is dangerous not because people rely on it but because they rely on it when it is inappropriate to do so**."[29]

A challenge for decision-makers is to reflect on the fact that their personal experience, including their most recent and well-recalled experience, may not be representative of common experience.

Scholars in this area recognise that, of necessity, judicial decision-making involves both intuitive and deliberative elements. And as Dr Burns notes, "Judges need not completely reject intuitive reasoning but should be encouraged to use deliberative reasoning to 'verify' their intuitive responses".[30]

In a 2014 article published in the *International Journal of Evidence and Proof*, Associate Professor Cunliffe, who also has contributed to this special part of the *Griffith Law Review*, explored a number of matters including cognitive biases and the fact that, "It seems to be human

[29] Ibid 344 (emphasis added).
[30] Ibid 344 n 272.

nature to value information that appears to confirm one's pre-existing beliefs and to disregard or fail to search for information that contests those beliefs".[31]

Faced with the prevalence and necessity for intuitive reasoning, Cunliffe considers the possibility of a process to "interrupt intuitive reasoning that is based on substitution or stereotypes, particularly where the stereotype is otherwise likely to distract the trier of fact from the most likely explanation".[32] This approach entails consciously asking:

> "for the account that I find more coherent to have occurred, what must the protagonist have done? When and how must she have done it? In what time period did it occur, according to the best and most independent evidence I can muster? How well is this account grounded in the trial record, and to what extent am I making inferences from proven facts? What evidence challenges this account, and do I disbelieve that evidence? Are there things I would expect to see if this narrative were true, but which are absent from or contradicted by the record? And, what assumptions am I making about human behaviour to get to his result?"[33]

Scholars like Simon, who is quoted by Cunliffe, suggest that judges work through a process of generating two or more models of a case and then restructure those models until they identify the model that is most coherent as a means of settling upon an outcome.[34]

If that is the way that triers of fact go about deciding cases, then Cunliffe is surely right in suggesting that the questions she suggests should be consciously asked have a capacity to focus a trier of fact "on the evidence that has not been accounted for by the preferred account, and to consider what inferences are being drawn to reach the preferred conclusion".[35]

The final question which Cunliffe suggests that decision-makers pose is:

> "What assumptions am I making about human behaviour to get to this result?"

In answering that question we need to consider whether those assumptions are based on outside knowledge, not disclosed to the parties, and whether fairness dictates that the parties should be told of the source of that outside knowledge and given the opportunity to challenge it. In many instances it may be hard for a decision-maker to identify the sources of the information and the experiences upon which certain assumptions are built. However, judicial decision-makers should interrupt intuitive decision-making, and query whether the outside knowledge upon which assumptions are based is reliable.

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31 Cunliffe above n 8, 163.
32 Ibid 176.
33 Ibid.
34 Ibid 143 n 18 citing D Simon, 'A Psychological Model of Judicial Decision Making' (1998) 30 *Rutgers Law Journal* 1, 84-5.
35 Ibid 176.

Fast and slow thinking by time-poor decision-makers

In this article I have concentrated on one source of cognitive bias: the availability heuristic. There are many others. If the process of decision-making prompts a decision-maker to ask at some stage "what assumptions am I making about human behaviour to get to this result?" the answer may be assumptions based on very limited experience or a statistically invalid sample size. If that is the answer, then the validity of the assumption is called into question and there may be some other more reliable sources of information. If this is the case then fairness and efficiency should encourage a judicial decision-maker to inform the parties of the relevant concern and encourage them to find the answer.

This part of the *Griffith Law Review* highlights important issues confronting the justice system: judicial decision-making and outside extra-legal knowledge. In addition to identifying a big issue confronting time-poor decision-makers, the authors suggest some steps to better illuminate the legal framework which governs the admission and evaluation of outside knowledge. These include some relaxation of the doctrine of judicial notice, particularly in cases where "legislative facts" about general factual propositions are in issue. They include the use of Benchbooks and other sources of high-quality empirical information to courts and lawyers. It includes research assistance and judicial education and legal education in relation to the interpretation of research material, including the interpretation of science and social science data.

The editors and authors are to be congratulated on making such a significant contribution to learning in this area, and in pointing in the direction of areas requiring further research, reflection and writing. I am delighted to be associated with the launch of this part of the *Griffith Law Review*.

Conclusion

Judges and other decision-makers are expected to learn about the world and about knowledge drawn from other disciplines, by being well-informed citizens, by reading outside the law, by attending conferences at which scientists and social scientists impart information and by inviting experts to speak to gatherings of judges. In an age in which judges are expected to know more and more about the way the world works, including the complexities of human behaviour, it is time that more thought was given to how judges make appropriate and fair use of such outside knowledge.

In the internet age it is easy for judges to self-source information. Just as it is easy for members of the general public to self-source junk science, junk medicine or outdated research, it is easy for judges to find unreliable information in their general reading or to make so-called "common sense" assumptions based on outdated and limited information. This is unfortunate, to say the least, if high-quality information drawn from a variety of disciplines outside the law is accessible and may be critical to a fair and just determination.

The principle of party presentation has served us well, however, it is under challenge, particularly in cases in which parties lack the resources to present evidence. High-quality information may be capable of being accessed by a judicial decision-maker, who is concerned about accuracy, fairness and reaching the right decision. The position is acute where the decision-maker is aware of sources of information of which the parties, or at least one unrepresented or under-represented party, are unaware. Some relaxation of the principle of party presentation seems justified to at least alert the parties to information of which the decision-maker is aware and upon which some unconscious reliance may be placed in reaching a decision.

Finally, sometimes judges invoke the wisdom of philosophers to support their conclusions. Dr Karen Schulz from Griffith Law School has considered the citation of philosophers in cases. One does not always need to quote a philosopher to advance a common sense proposition. Some things are simply common sense, and everyone know them. You do not need to call a Professor of Mathematics as an expert witness or invoke a philosopher to establish the common sense proposition: "When you got nothing, you got nothing to lose."

But if you need judicial support for this proposition, you can cite Chief Justice Roberts of the United States Supreme Court, who wrote those words in a 2008 judgment. This was not the first time the Nobel Laureate for Literature, Mr Dylan, has been quoted in support of a common sense proposition. But it was the first time he was quoted by the US Supreme Court. A California appeals court wrote in 1981:

> "The correct rule on the necessity of expert testimony has been summarized by Bob Dylan: 'You don't need a weatherman to know which way the wind blows." [36]

Judicial decision-makers may not need an expert witness, or indeed any witness, to tell them things they already know. However, whenever we intend to rely on knowledge from outside the judicial record in the case at hand, it is advisable to ask:

1. From where did I get this knowledge?

2. Is it reliable? For instance, is it based on experience which is not reflective of general experience, outdated information or information which is incomplete or contestable?

3. Does fairness dictate that I disclose this "knowledge" to the parties, and give them an opportunity to make submissions about why I should not rely on it, or give it less weight than I think it deserves.

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[36] Adam Liptak, 'The Chief Justice, Dylan and the Disappearing Double Negative' *New York Times* (online), 29 June 2008 <http://www.nytimes.com/2008/06/29/weekinreview/29dylan.html>.