The marriage of psychology and law: testamentary capacity

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Banks v. Goodfellow [1870. LR 5 QB 549 (Eng.)] is almost 150 years old, yet still stands as authority for the principle that unsoundness of the mind will not rebut testamentary capacity where it does not affect the will itself. Readers of this journal would know that psychology has advanced greatly during this sesquicentenary, and yet the law relating to testamentary capacity has remained relatively stagnant. We review the present laws relating to decision-making for adults with impaired capacity, particularly in Queensland, and also review various models of gauging decision-making capacity in other jurisdictions. We argue that qualified experts should be enlisted to make determinations about testamentary capacity when questions of capacity arise. We also argue the case for the development of scientifically validated protocols to assess decision-making capacity in the testamentary context.

Keywords: assessment protocol; cognitive testing; dementia; expert evidence; regulated decision-making; testamentary capacity

Banks v. Goodfellow

The 1870 decision of the Queen's Bench in *Banks v. Goodfellow*¹ stands as authority for the principle that the capacity to make a will is not lost because of unsoundness of mind that does not affect the will itself.² In that case, the plaintiff was the heir of John Banks, and disputed the validity of a will made in favour of Margaret Goodfellow. It was not disputed that John Banks 'had at former times been of

unsound mind'.³ As Cockburn CJ observed, for the bench including himself, Blackburn, Mellor and Hannen JJ, Mr Banks:

had been confined as far back as the year 1841, in the county lunatic asylum; discharged, after a time, from the asylum, (but) he remained subject to certain fixed delusions. He had conceived a violent aversion towards a man named Featherstone Alexander, and not with

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standing the death of the latter some years ago, he continued to believe that this man still pursued and molested him; and the mere mention of Featherstone Alexander's name was sufficient to throw him into a state of violent excitement.⁴

Banks also had epilepsy, and was treated by 'a medical man' who deposed that Banks was 'insane, and incapable of transacting business during the whole time'.⁵

On the other hand, it appears that Banks 'was careful of his money'⁶ and 'was able to manage his own affairs, and, apart from the delusions under which he laboured was',⁷ at all relevant times, of sufficient testamentary capacity. The court concluded that 'a degree or form of unsoundness which neither disturbs the exercise of the faculties necessary for such an act, nor is capable of influencing the result, ought not to take away the power of making a will, or place a person so circumstanced in a less advantageous position than others with regard to this right'.⁸ Settling a principle that is referred to with approval by courts to this day, Cockburn CJ, for the court, said:

It is essential to the exercise of . . . (testamentary) power that a testator shall understand the nature of the act and its effects; shall understand the extent of the property of which he is disposing; shall be able to comprehend and appreciate the claims to which he ought to give effect; and with a view to the latter object, that no disorder of the mind shall poison his affections, pervert his sense of right, or prevent the exercise of his natural faculties – that no insane delusion shall influence his will in disposing of his property and bring about a disposal of it which, if the mind had been sound, would not have been made.⁹

Subsequent Australian decisions have confirmed that a person may challenge a will if she or he is able to demonstrate either by direct evidence, or by reasonable inference from proven facts, that a delusion affected the challenged provisions. So, in *Bull v. Fulton*, Williams J of the High Court of Australia observed that:¹⁰

A sound and disposing mind is one which is able to reflect upon the claims of the several persons who, by nature, or through circumstances, may be supposed to have claims on the testator's bounty and the power of considering the several claims, and of determining what proportions the property shall be divided between the claimants.

If a testator suffers from an insane delusion that affects part of a will, the presumption will be that the testator is not competent and, subject to evidence to the contrary, the whole will can be declared invalid.¹¹ The general criterion of acceptability of testamentary activity is that the testator must understand the facts and the choices involved, weigh up the consequences, and effectively communicate a decision. There is a presumption of capacity; however, when this presumption is rebutted, additional information is indispensable in assisting a trier of fact to establish the presence, or otherwise, of capacity.

It has long been the case that Australian courts will have regard to the evidence of experts when insanity is in issue (see *Timbury v. Coffee*, 1941, 66 CLR 277). However, the *Banks v. Goodfellow* doctrine, which focuses on psychosis, is less apt for other illnesses that may affect testamentary capacity, such as dementia (Purser & Rosenfeld, 2015). There have been significant advances in the fields of psychiatry and psychology in the intervening 150 years. As Kelly Purser has correctly observed, in light of the significant advances in the fields of psychiatry and psychology in the intervening sesquicentenary, 'it is remarkable that the testamentary capacity doctrine has undergone so little refinement since its establishment in the 19th century' (Purser & Rosenfeld, 2015, p. 854).

How do legal practitioners actually determine a client's ability to weigh up options and reach a decision? Do they rely on a heuristic of common sense or some implicit assumption that an acceptable explanation is proof of sufficient functioning? If so, then such a notion conflicts with the scientific evidence of

professional judgements. Consider the possibly quite common circumstances where an ‘impairment or disturbance leads to a patient making a specific decision without understanding or using the information they have been given’ (Griffith & Tengnah, 2013, p. 251). It is undeniable in such circumstances that evidence provided by cognitive functioning tests would assist. But there is a dearth of research into the efficacy of commonly used cognitive assessment tools vis-à-vis legally accepted determinations of decision-making capacity as it relates to propounding a will and appointing an enduring power of attorney (and indeed, more widely).

This article considers the process of assessing testamentary capacity, and also capacity to appoint an enduring power of attorney. We are particularly interested in the criteria applied to judge whether an assessment is acceptable. Since our principal objectives are to consider cognitive functioning tests, we only consider legislation in one place, the Australian state of Queensland. Though our focus is on Queensland, we regard the observations made herein to be likely to be applicable to other Australian jurisdictions, and at least to other common law jurisdictions.

Our central argument is that the combination of an ageing population, an increase in the prevalence of dementia illnesses, and an increase in the complexity of financial and family structures has resulted in a need for scientifically validated protocols to assess decision-making capacity. The need for such protocols has been formally recognised by relevant legislation, such as the *Powers of Attorney Act 1998* (Qld); however, legislative changes have preceded research into relevant assessment protocols. While guidelines are available that detail general approaches to conducting capacity assessments, they neglect detail when it comes to selecting appropriate cognitive assessments. The seminal questions that capacity assessment research needs to answer are: (a) which cognitive tests (if any) best predict capacity, and (b) what testing

protocol best adheres to scientifically and legally appropriate standards.

A divorce between medicine/science and the law has taken place, and yet we believe a happy marriage is possible. In this article we explore the relevant issues and set out original research addressing the questions raised above.

Why Australian lawyers should involve other experts when they conduct capacity assessments for their clients

The proportion of people in Australia aged 85 years and over increased by 141.2% in the last 20 years compared with a total population growth of only 32.4% (Australian Bureau of Statistics, ABS, 2016). There has also been an increase in the total number of older adults diagnosed with dementia illnesses (Alzheimer’s Association, 2018; Australian Institute of Health and Welfare, 2018). The Queensland Higher Courts Civil Database System revealed an increase in the total number of estate disputes in Queensland District Courts from 100 in the 2007–2008 financial year to 230 in the 2011–2012 financial year (QCivil, 2013). In 2018, the Productivity Commission reported that the number of probate lodgements in the Supreme Court of Queensland rose from 8,036 in 2010–2011 to 10,686 in 2016–2017 (Australia. Productivity Commission, 2018). This trend is consistent with evidence from other jurisdictions, which revealed that testamentary capacity is the most frequently litigated form of capacity (American Bar Association and American Psychological Association, ABA–APA, 2008; Nedd, 1998). In the United States, the two key professional bodies have recommended that lawyers seek specialist opinion on decision-making capacity¹² for their clients (ABA–APA, 2008). Scholars have indicated that demand for such opinions is likely to increase over the next two decades (Braun & Moye, 2010).

Rule 8 of the Australian Solicitors Conduct Rules (Queensland Law Society, 2012) states

‘[a] solicitor must follow a client’s lawful, proper and competent instructions’ (p. 7). The Queensland Law Society (QLS) extends this point as follows:

the legal test for capacity varies according to what is involved, for example whether the client wants to make a will or enduring power of attorney or to pursue a court case. It is often difficult for a solicitor to assess whether a client has capacity. In cases of doubt a medical assessment may be needed. (QLS, 2015, para 2).

Furthermore, the QLS Client Care–Communication and Service (2014) communicate reminds practitioners that, ‘ . . . as with specific regulatory obligations, it is important to think of client care not as some defined minimum benchmark, but as a constant journey towards best practice and ever-higher levels of client satisfaction’ (p. 3).

In determining the requirement for specialist opinion, lawyers are required to balance the potential negligence of not acting on a client’s instructions, with taking the time to ensure the client has capacity. Failing to ensure the client has capacity was central to the decision in *Legal Services Commissioner v. Ford* (2008). This case involved a Queensland lawyer (Ford) who was found to have conducted himself unsatisfactorily when considering the capacity of his client, Mrs Adams. In his summary judgement, Justice Fryberg commented (at p. 22):

In my judgment, Mr Ford, ought to have been particularly alert to the possibility that there might be some question as to Mrs Adams’ capacity to do these things. She was, to his knowledge, an elderly person. She was in a nursing home. She was cutting her family out of her will. She was leaving everything to the person who was facilitating the arrangements [p. 21] . . . I am satisfied that he failed to make an appropriate written record of all steps taken in assessing Mrs Adams’ competence or, toward that end, including all questions and answers.

This case stands in contrast to the judgement of the Court of Appeal in *Sharp v. Adam* (2006). The will in that case was found invalid for lack of testamentary capacity, but the lawyer was protected from liability because she adopted a structured approach to balancing the client’s instructions with determining capacity. As Reid Mortensen has observed (Mortensen, 2002, p. 75), ‘the solicitor is no mere scrivener rephrasing the testator’s wishes in appropriate legalese’.

These judicial decisions, ethical guidelines and academic wisdom together highlight the importance of documenting all instructions (including reasons for significant changes in instructions), involving witnesses, reviewing medical information, and referring in the instance of suspected incapacity. Yet to our minds this is not enough. The surge in prevalence of dementia illnesses in an ageing population and the subsequent increase in legal challenges to capacity emphasise the need for lawyers to involve suitably trained experts to conduct capacity assessments using suitable tools. Contemporaneous assessment of clients with potential incapacity by professionals with specific training in assessing capacity is imperative to assist the courts in making determinations in the instances of legal challenges (Schulman, Peisah, Jacoby, Heinik, & Finkel, 2009).

Capacity assessments are often required to appreciate the functional impact of cognitive difficulties, to inform intervention, and to define the parameters of a patient’s autonomy (Lai & Karlawish, 2007; Wong, Clare, Gunn, & Holland, 1999). Accurate capacity assessments help reduce the potential for adverse events to patients such as financial abuse, self-neglect, or risk of injury or accident. In keeping with the functional definition of capacity, objective evidence about a person’s ability to receive, evaluate and communicate information is more important than a diagnostic classification.

The functional elements of legal decision-making are almost entirely cognitive in nature.

The cognitive processes implicated in decision-making in general include memory, learning, attention, language and executive functions (Saunders & Summers, 2011). The cognitive processes involved in making a will and appointing an enduring power of attorney include: semantic memory, verbal abstraction, verbal comprehension, historical memory, short-term memory, ability to appreciate value, biographical memory and executive functions. There is very little research that has examined the relationship between impairments in these cognitive processes and decision-making capacity.

That said, it seems clear that testamentary capacity can be influenced by different conditions including, but not limited to, dementia illnesses, substance use disorders, mood disorders, delusions and other medical conditions (Shulman et al., 2007). Different types of evidence can be employed to challenge testamentary capacity, including recall of incidents at the time a will is made by friends, family and the solicitor, and medical information including observations, clinical notes, medical diagnoses, results from psychometric assessments and notes from nursing homes. However, medical evidence alone does not answer the legal question of capacity (Campbell, 2006).

In addressing the question of who can assess capacity, Church and Watts (2007) indicated that specialist opinions may be garnered from a psychiatrist, medical specialists, a clinical psychologist or neuropsychologist. The same view was held by Brietzke (2007), 'in practice detailed capacity assessments are usually conducted by geriatricians, psychiatrists, neuropsychologists and psychologists' (p. 19).

In New South Wales, the Attorney Generals' Department noted that 'a range of people in the community are recognised as having a responsibility to undertake an assessment of a person's capacity . . . [including] an allied health worker' (New South Wales Attorney General's Department, 2008, p. 54). This view was shared by Moye and Marson

(2007) who acknowledged that capacity is a ' . . . generic, everyday issue that permeates different sectors of society. Issues of decision making capacity are germane to a wide range of professional disciplines . . . ' (p. 4). However, the Mental Capacity Implementation Programme in the United Kingdom indicated that 'anyone can assess capacity, including medical professionals, advisers, lawyers, friends, relatives and carers, *but the person who assesses should be someone appropriate to the decision or action in question* [emphasis added]' (Mental Capacity Implementation Program, 2009, p. 16).

A survey of 119 probate judges in the United States revealed that roughly equal numbers of physicians, psychiatrists and allied mental health professionals were involved in cases involving mental capacity (Spar, Hankin, & Stodden, 1995). Notably, judges found expert testimony to be extremely influential in 51% of capacity cases and 37.4% of undue influence cases. When referring for specialist assessment, many disciplines may be adequately placed to comment. However, what is most important is the clinician's understanding and experience in assessing capacity.

Undue influence

There is another important reason why we recommend the involvement of an independent, properly qualified and experienced expert to conduct capacity assessments. One must consider the potential for conflicts of interest. The assessor ought to be independent (Stewart, Bartlett, & Harwood, 2005). This is especially critical in instances of family conflict. We understand that families can ally and co-opt health professionals (Peisah, Brodaty, & Quadrio, 2006); however, the presence of several professionals, including the lawyer and the mental health practitioner, makes it less likely that a vulnerable testator or appointor will be exploited.

In Australia, challenges of undue influence involve establishing whether the conduct of a third party or parties has affected the

behaviour of the deceased to a point where free agency is usurped (Nicholson v. Knaggs, 2009, VSC 64; Carey v. Norton, 1998, NZLR 661; Dickman v. Holley, 2013, NSWSC 18). Usurping of power is much more significant than merely influencing or manipulating someone (Verspaandonk, 2013). Influence can take place irrespective of capacity; however, the risk of undue influence is increased in the presence of vulnerabilities, such as cognitive impairment (Singer, 1993).

Establishing voluntariness is essential to determining capacity (Kapp, 2015). An assessment of undue influence focuses on the legal indicia of undue influence by investigating and documenting the existence of risk factors. An assessor needs to consider the presence of a third party who isolates the client from their usual support networks, encourages mistrust in others whilst winning over the client with gifts and acts of kindness, and finally places the client in a position to change their financial arrangements in favour of the potential manipulator. These changes are usually inconsistent with the client's earlier stated values; thus, it is prudent to obtain a copy of a previous will. It is an assessor's role to document risk factors, and worksheets are available to guide assessors (Blum & Feledy, 2002). Furthermore, in addition to the behavioural, medical and legal aspects to the traditional capacity assessment, additional questions ought to be included that deal with the emotional and psychological context of these changes, the rationale for changes, the appreciation of the impact of these changes, and a clear statement on why potential beneficiaries were excluded (Shulman, Cohen, Kirsh, Hull, & Champine, 2007). Psychologists are well placed to undertake this role.

Regulated decision-making: Guardianship and Powers of Attorney

In Queensland, the *Guardianship and Administration Act 2000* (Qld) and the *Powers of Attorney Act 1998* (Qld) regulate decision-making for adults with impaired capacity.

A person has capacity so long as they understand the nature and effect of the decision they are making, make the decision freely and voluntarily, and communicate their decision. Importantly, people with capacity have the right to make decisions with which others do not agree; it is not a matter of making a good decision, it is a matter of whether the decision-making process is intact. As capacity is functionally defined, it can change across time and decisions. Practitioners need to be aware not to extrapolate incapacity in one area erroneously to other areas and different decisions (Ganzini, Volicer, Nelson, & Derse, 2003). In *Scott v. Scott* (2012), Justice Lindsay of the Supreme Court of New South Wales helpfully summarised the relevant legal principles and concluded (at [199]):

What follows from this statement of principle is that each case must be considered on its own facts. Care needs to be taken not to over-generalise. There is no rule of general application relating to all powers of attorney without regard to particular facts. Attention must be focussed on all the circumstances of the case, including the identities of the donor and donee of a disputed power of attorney; their relationship; the terms of the instrument; the nature of the business that might be conducted pursuant to the power; the extent to which the donor might be affected in his or her person or property by an exercise of the power; the circumstances in which the instrument came to be prepared for execution, including any particular purpose for which it may ostensibly have been prepared; and the circumstances in which it was executed.

When assessing capacity, there is a presumption of capacity unless contrary information becomes available. The standard of proof to rebut the presumption of capacity is the balance of probabilities. In Queensland, once the presumption of capacity is rebutted, consequential actions are guided by the 11 Principles of Capacity (*Guardianship and Administration Act 2000*). These principles can be summarised as: a presumption of capacity; a right to decide;

respect for human worth; the importance of valued social roles; social engagement; self-reliance; maximum involvement; least restrictive decision-making protocols; maintaining supportive relationships; respecting cultural, linguistic and religious values; and the right to confidentiality. These principles are also reflected in the Convention on the Rights of Persons with Disabilities (UN General Assembly, 2007).

In 2008, the Queensland Law Reform Commission (QLRC) released a discussion paper on Queensland's guardianship legislation. In all Australian states and jurisdictions (except Queensland), definitions of impaired decision-making refer to some diagnostic causation. The link between diagnosis, test results and their causative impact on decision-making deficits needs to be elucidated (Marson et al., 2004). In the Northern Territory, Tasmania, Victoria and Western Australia, a person who is unable to make a reasonable judgment qualifies for decision-making assistance. The Australian Capital Territory (ACT) and Northern Territory specifically exclude the consideration of factors including eccentricities, personal opinions, sexual orientations, immoral conduct, and the effects of drugs and alcohol. A person's functional ability to decide is all that matters. A potential difficulty with this approach is that to apply the presumption of capacity principle rigorously would indicate a need for multiple assessments of capacity. It remains unclear whether subsequent attempts to make the same decision would again require subsequent assessments, and, if so, who would bear the onus of proof in these occasions (QLRC, 2008). The Legal Commission of Ireland advocates a *common sense* approach to determine whether separate assessments are needed. This presumably relates to balancing the concepts of autonomy and paternalistic maleficence.

Queensland is the only Australian jurisdiction that includes a component regarding voluntariness in decision-making capacity. This concept relates to traits of susceptibility and

undue influence. The Queensland legislation merges the need for assessments of both competence and voluntariness. The potential for financial abuse by appointed attorneys is a significant issue socially and legally (Wuth, 2013).

Legally, the requirement for a person to understand the nature and effect of a decision is clearly stated. The cognitive processes involved in decision-making are not so clear, and there has been less focus on how to assess decision-making than on the substitute decision-making protocols (Appelbaum & Grisso, 1988). *The Mental Capacity Act 2005* (UK) states that if a person can understand the relevant information, retain this information (for the time required to decide), and use that information to reach a decision, then they have capacity. The legislation does not elaborate on how much or how complex the presented information needs to be. The Act also emphasises the need to use simple language and involve aids as necessary.

An additional reason why a psychologist or similarly qualified expert should be enlisted to assist in contemporaneous assessment of the testator or donor of powers is because it makes retrospective determinations of capacity more readily achievable. So, for example, the Queensland Civil and Administrative Tribunal retrospectively considered the capacity of a principal to appoint an enduring power of attorney (EPA; *Re TGD*, 2005). Unfortunately, the lawyer '... did not ask the adult questions in relation to the statement of understanding outlined in Section 41 of the *Powers of Attorney Act 1998*, other than those requiring yes/no answers' (at 21). In this case, the results from cognitive testing and clinical observations were considered in ruling the appointment invalid, and therefore a prior appointment was reinstated.

Returning to the New South Wales case of *Scott 2000*, Justice Lindsay considered the extent to which a person needs to understand the potential future actions of an appointed attorney. For example, consider the case of a

principal who is encouraged to appoint an attorney for the purposes of conducting a pre-arranged set of transactions (such as to evict a troublesome family member from a property). In considering the principal's capacity Lindsay J remarked:¹³

... Attention must be focussed on all the circumstances of the case, including the identities of the donor and donee of a disputed power of attorney; their relationship; the terms of the instrument; the nature of the business that might be conducted pursuant to the power; the extent to which the donor might be affected in his or her person or property by an exercise of the power; the circumstances in which the instrument came to be prepared for execution, including any particular purpose for which it may ostensibly have been prepared; and the circumstances in which it was executed.

An unapprised assessor would not normally consider the principal's capacity to make the more complicated actions beyond the appointment and general powers granted; however, the adjunct of formal contemporaneous assessment would make retrospective determinations of capacity more readily achievable. Lindsay J continued:¹⁴

... The focus of the Court must be on the *substance of the inquiry* [emphasis added] whether the particular subject had, in fact, the requisite capacity – understanding – to effect a particular transaction.

Justice Lindsay also referred to the reasoning in *Ranclaud v. Cabban* (1988):

... One might ask how a person who was incapable could make a Power of Attorney in the presence of such professional gentlemen. I think the answer is relatively clear. A person only seeing a little bit of the picture and seeing [the Principal] for a short time ... may well form the view that it is safe to allow [the Principal] to proceed. It is only when one gets a complete overview of the evidence

that one can see just how incapable [the Principal] really is. ... [p. 137]

In particular, an acknowledgement should be made of the importance of expert medical evidence as a lens through which a myriad of facts can be seen in context, as a guide to correct decision-making and as a safeguard against error. [p. 209]

Therefore, although a person may meet the legal test, their capacity can still be open to challenge. The principal needs to have the capacity to appreciate the likely decisions to be made at the time. Such circumstances may only be revealed to an assessor at a later date, and therefore may not be subject to the contemporaneous assessment. In these cases, the additional expert medical evidence will prove invaluable.

Enduring documents

Consider the enduring power of attorney (EPA) and advanced health directives (AHD) in Queensland under the *Powers of Attorney Act 1998 (Qld)*. A higher standard of cognitive functioning is often recommended for decisions that impact on the older person in life, such as appointing an EPA as opposed to giving instructions for a will. The rationale for this is that the decisions made can affect the person in life, as opposed to taking effect after their death (ABA–APA, 2008). This notion of a decision-specific cognitive threshold is also evident in life-threatening situations, where the threshold of probable incompetence may be lowered to enable treatment (Appelbaum & Grisso, 1988).

For an EPA, a principal designates one or more people to manage their future care relating to financial, healthcare or personal matters. AHDs enable a principal to stipulate directions and preferences, in advance, relating to issues of healthcare. The powers relating to personal and healthcare matters associated with an EPA and the AHD can only come into effect once the principal has

lost capacity. The powers of a financial attorney can take effect at different times, including immediately at the time the document is signed. Sections 41 and 42 of the *Powers of Attorney Act 1998 (Qld)* detail the specific legal tests of capacity required to appoint an EPA and establish an AHD. The legal tests relate to the principal's capacity to understand the decision being made. Specific question-sets are available to assess knowledge of AHDs; however, the question-sets available for assessing capacity to appoint an EPA (Section 41) are indicated but not considered exhaustive (QLRC, 2008). A person can only appoint an EPA if they understand the nature of the document and also, at some level, the likely decisions this person could make on their behalf. For the AHD, the person also needs to consider some of the possible decisions that may arise in the future. These documents must be signed by a witness who can attest to the principal's capacity; however, there is no guarantee that these witnesses are adequately trained to assess capacity (QLRC, 2008).

Lucid intervals

Finally, an additional reason for involving suitably qualified and experienced experts is to manage the phenomenon of lucid intervals. Ascertaining the general ageing process from pathological cognitive impairment is a clinical skill that can be complicated by lucid intervals. Individuals may possess periods of capacity embedded within longer periods of incapacity, and documents executed during the periods of lucidity should be upheld. Although entirely possible, some feel that lucid intervals may be more legal loophole than clinical reality (Marson et al., 2004). This highlights the benefit of having a healthcare professional with experience in assessing cognition present at the time of the execution of these enduring documents (Clow & Allen, 2002; Spar et al., 1995).

Commonly employed assessment protocols

In what follows we review commonly employed assessment protocols, and offer a critique.

The American Bar Association and American Psychological Association guidelines

The American Bar Association, in collaboration with the American Psychological Association (ABA–APA, 2008) published guidelines developed from the collective wisdom of experienced practitioners. They outlined nine steps:

1. *Identify the applicable legal standard.* The legal standards of capacity vary between jurisdictions. An assessor needs to identify the relevant standard prior to conducting the interview.
2. *Identify and evaluate the functional elements.* As most jurisdictions follow a functionally defined standard of capacity, it is important to consider the cognitive, behavioural and emotional elements involved in the specific decision. These factors will vary across decisions.
3. *Determine relevant diagnoses contributing to incapacity.* Review of treatment notes and reports allows an assessor to consider the functional impact of any relevant diagnoses. Furthermore, collateral information gathered serves to determine the accuracy of information gathered during the interview.
4. *Evaluate cognitive functioning.* Most assessments will involve a cognitive screening test and additional measures of executive functioning, memory, attention, language, processing speed, judgement, and reasoning.
5. *Consider psychiatric and emotional factors.* Assessments of psychiatric factors are important as they may

affect judgment and insight, such as in severe depression or psychotic illness. In such cases it may be relevant to recommend treatment interventions prior to a making a final determination of capacity.

6. *Consider individual values.* In considering a person's values and preferences it is important to note whether the current instructions are consistent with previous principles and values. Accessing prior wills and enduring documents is a good way to identify sudden changes that may be inconsistent with earlier stated values. The assessor would then need to document the reasons for these changes.
7. *Identify any risks.* Consider the potential risks of the decision. Risks are heightened when the consequences of the decision are immediately enforceable. Clients with strong social support networks are generally at decreased risk of negative consequences. Ruchinskas (2003) notes the task of identifying risks is complicated by the lack of information available on the accuracy of risk predictions. Clinicians often make confident predictions despite: (a) rarely getting feedback on the prior accuracy of predictions; (b) being unaware of certain biases, and (c) considering the difficulty inherent in predicting a low base rate phenomenon. On the whole, Ruchinskas (2003) argues for a scientifically validated method for making predictions about risk as a necessary step in conducting capacity assessments.
8. *Consider ways to increase capacity.* Some common ways to increase capacity include visual prompts, interpreters, alterations in medication timings and doses, educating the client about the decision they are facing,

treating acute or transitory conditions, or waiting for a lucid interval. There are guidelines available to assist assessors when factors of cognitive communication disorder are present (Zuscak, Peisah, & Ferguson, 2015).

9. *Make a formal clinical judgment of capacity.* Ultimately the task of the capacity assessment is to assimilate the information and apply the general guiding principles and applicable legal test. Assessors are encouraged to reach a yes or no binary determination of capacity. If a marginal decision must be given, then information for both sides of the argument should be provided so that a judge has sufficient information to make a final ruling. When considering conflicting results across the test battery, functional assessments carry most weight, followed by cognitive performance, and finally psychiatric, emotional and medical diagnoses.

The American Department of Veteran Affairs guidelines 1997

In contrast to the ABA–APA (2008) guidelines, the **Department of Veteran Affairs** (DVA) guidelines favour clinically researched and validated outcomes as opposed to practitioner experience and opinion (Department of Veterans Affairs, 1997; Baker, Luchtenberg, & Moye, 1998). The guidelines integrate findings from neuropsychology, geriatric psychological assessment, literature and independent reviews. They are written in a way to enable comprehensive assessment by psychologists without specific neuropsychological or geriatric training. There are five basic stages:

1. *Clarify the purpose for referral.* A prospective assessor ought to confirm that a capacity assessment is required and identify a suitable assessor.

2. *Plan for the assessment.* Issues of consent, confidentiality and which assessment measures to use should be considered prior to commencing the assessment.
3. *Conduct the assessment.* A good assessment will include a clinical interview, psychometric assessment, and objective performance-based measures.
4. *Compile a comprehensive report.* A report must answer the referral question.
5. *Acknowledge limitations and make recommendations.* Reports should indicate if there is a need for further assessment or second opinion. This may include an occupational therapist assessment of performance-based activities.

The Regional Capacity Assessment Team (RCAT) model

The Regional Capacity Assessment Team (RCAT) model, developed by Pachet, Newberry, and Erskine (2007), is a cost-effective and clinically sound model. The team is composed of a neuropsychologist, a psychological assistant, a social worker and an occupational therapist. After assessing patient consent, they rule out any reversible conditions and decide whether they will continue with the assessment. For the patients who proceed to formal assessment, a clinician interviews the referral source to clarify triggers for assessment and indicators of incapacity, and at this point may request further investigations to be conducted, such as neuroimaging. The social worker assesses support systems and interviews collateral sources for a history of decision-making values. A psychosocial prompt sheet is used to gather relevant information across a range of clinically relevant areas (Newberry & Pachet, 2008). Such areas include: medico-legal context, living situation, social and family history,

coping, social supports, religious and cultural factors and risk of abuse. The occupational therapist administers relevant functional standardised assessments, lists possible risk factors, and makes recommendations. The psychological assistant administers a cognitive battery that is either comprehensive or targeted. The assessment usually involves the Behavioural Assessment of the Dysexecutive Syndrome (Wilson, Alderman, Burgess, Emslie, & Evans, 1996), the Rey Auditory Verbal Learning Test (Rey, 1964), the Rey Complex Figure Test (Meyers & Meyers, 1995), and the Wisconsin Card Sorting Test (Berg, 1948). The patient then responds to a semi-structured interview (question-set) based on the relevant legislation relating to decision-making. In acute settings, the RCAT team may forgo the assessment tools and proceed directly to the question-set interview. After all the information is gathered, each team member independently rates, on a seven-point Likert scale, the patient's level of capacity. Using a consensus-based approach they then make the final recommendation and prepare a brief written report (a maximum two pages) back to the referrer to whom they defer the final decision. To our minds, the method by which professionals weigh up the information to reach their individual decisions are not clearly explicated, nor is the weighting, if any, they place on cognitive test results. A further limitation is that the team do not consider cases of financial or legal capacity.

The Six-Step Capacity Assessment

Darzins, Molloy, and Strang (2000) developed a six-step process that is sensitive to the legal nature of capacity determinations. These guidelines were developed to assist occupational therapists in healthcare situations, and are predominantly functionally based. The guidelines do not detail how to assess the cognitive processes needed for more complex

decisions (such as making a will). The six steps are summarised below.

1. *Ensure a valid trigger.* An assessor needs to ascertain reasonable grounds of impairment before seeking evidence of incapacity. This may include potential risks due to incapacity, or impaired performance on cognitive screening tests.
2. *Engage the patient.* Assessors must attempt to gain consent or assent prior to the assessment and discuss the possible outcomes of the assessment.
3. *Information gathering.* Further information should be sought about risks, observations, and other available collateral information. Assessors need to fully appreciate the choices and community resources available to the patient. In the case of testamentary capacity, objective sources should be sought to gather information about the testator's assets and potential beneficiaries.
4. *Education.* The patient needs to be informed of all their options (including doing nothing) and the foreseeable consequences therein to maximise the opportunity for capacity to be reached.
5. *Checking for understanding, assessing capacity.* This section is less clearly explicated; however, it seems to deal with assessing for the presence of delusional constructs or cognitive impairment. There are no suggestions for how to do so.
6. *Act on results.* An assessor is encouraged to seek a lawful decision-making substitute to assist the client in making the relevant decision. It is also important to recognise that if the patient is knowingly making a bad decision, that the patient's right to do so is respected, so long as the patient has demonstrated a rational evaluation of the relevant

factors; one must distinguish the decision from the process (Appelbaum & Grisso, 1988).

The NSW Capacity Toolkit

Closer to Queensland, the 2008 New South Wales Attorney General's Department released a set of guidelines for the assessment of decision-making capacity. These guidelines were raised out of discussions and feedback over a five-year period. The Capacity Toolkit covers appropriate decision-makers, guiding principles, practical tips, legal tests, assisted decision-making and further resources. The general process of decision-making involves establishing a trigger, educating the patient, interviewing the patient and making a determination. The Capacity Toolkit also addresses assisted decision-making protocols. There are specific sections on testamentary capacity and capacity to appoint an EPA. For testamentary capacity, the Capacity Toolkit defines the legal test as 'capacity = nature + effect of the will at the time it is being made' (New South Wales Attorney General's Department, 2008, p. 138) and follows similarly with a question-set and vignette. The term *nature* is not defined in the document, but seems to relate to an understanding of the general effect of a legal decision. That is, that a will (a) is a document that can be changed or revoked up until death (provided they have capacity), (b) comes into effect after death, and (c) deals with the distribution of assets.

For EPAs, the Capacity Toolkit summarises the legal test as 'capacity = nature + effect of the document at the time it is made' (New South Wales Attorney General's Department, 2008, p. 130). This section is followed by a question-set, which relates to the specific points of the decision to be made, and a case-study vignette to illustrate a typical presentation. The Capacity Toolkit does not make recommendations for cognitive or functional assessments in addition to the semi-structured interview.

Summary of extant assessment protocols and implications for structured assessment of testamentary capacity

The following steps represent an amalgamation of the summarised guidelines referred to above:

1. Gain consent or assent to conduct the assessment.
2. Gather background information relating to the decision being made, including specific triggers, potential risks, prior decisions, and patient values. At this stage, an assessor can start to consider if there are ways to increase the patient's capacity, such as through the use of visual aids.
3. Identify the relevant legal test of capacity.
4. Operationalise the functional components in the decision to be made, which may include cognitive and physical processes. The assessor then selects valid and reliable tests that measure these processes.
5. Conduct cognitive and functional assessments.
6. Conduct a legally informed semi-structured interview relevant to the decision being made.
7. Compile a report with a formal recommendation about the patient's capacity.

The key to an effective assessment lies in the assessor's ability to select relevant tools for assessing specific cognitive domains and integrate the results with observations, objective collateral information, and performance on question-sets. It is important to administer general tests of cognitive ability, because these are correlated with specific cognitive abilities and have stronger test properties and theoretical underpinnings. Furthermore, general cognitive measures yield a cognitive profile, which assists in identifying strengths and weaknesses, allowing for recommendations for supported

decision-making and strategies to enhance capacity (McSherry, 2015; Stavert, 2015). For instance, Kapp (2015 p. 169) observes that: 'Many decisionally capable people need the physical assistance of others to execute their wishes. That need should not disqualify those persons from the right to exercise autonomy in decision making'. Finally, Royall et al. (2007) support the inclusion of general tests of cognitive capacity to enable a standardised approach across assessors. This would enable meta-analysis of the utility of these cognitive tests and would also provide important data to be considered when performing retrospective assessments, where only cognitive test results may be available. However, it has been observed that reliance on the results of cognitive tests without drawing explicit reference to the functional impairments vis-à-vis the legal tests is a common pitfall for the unwary expert witness (Gutheil, 2007).

Cognitive tests

Informed by these tests and this summary, we now turn to consider cognitive tests and screening measures. To ensure that the discussion is based on a consensus about the cognitive processes involved in each step of ascertaining testamentary capacity, we have adopted the approach of Marson et al. (2004), who lists them as:

1. *Understanding the nature of a will*: semantic memory for a glossary of relevant terms, and verbal abilities of abstraction, comprehension and expression.
2. *Knowing the nature and extent of assets*: memory functions including semantic, historical, and short term (such as recent changes to asset holdings), comprehension of value, and the ability to communicate general estimates of value.

3. *Listing the objects of one's bounty:* historical and short-term memory (such as the status and history of personal relationships).
4. *Making a determination of how to distribute assets between beneficiaries:* executive functions requiring the testator to synthesise information and formulate responses. Silberfeld (1994) found that understanding the likely consequences of decisions was the most challenging aspect of the decision-making process.

Although the cognitive underpinnings of the four fundamental elements of testamentary capacity iterated by Marson et al. (2004) are reasonably clear-cut, deciding on which cognitive tests to administer is a complex step. The assessor needs to operationalise the legal definitions, and there is very little research on which tests are valid and reliable insofar as determining capacity is concerned. Sullivan (2004) proposed that capacity assessments should involve a general cognitive ability assessment, followed by a decision-specific assessment tool or question-set for the decision facing the patient. The question-set often follows a cognitive assessment and serves to elucidate the specific functional implications of cognitive performance. The Capacity Tool Kit provides legally informed question-sets for testamentary capacity and capacity to appoint an EPA.

Semi-structured clinical interview for financial capacity

Marson et al. (2009) sought to develop an individually administered, brief, semi-structured interview to assess financial capacity. They brainstormed the skills and abilities of financial management and created test items relating to eight areas of money management: basic money skills, conceptual knowledge, cash transactions, cheque book management, bank statement management, financial judgment, bill payment, and knowledge of personal

assets and estate arrangements. The interview was piloted with participants from an Alzheimer's disease research centre who had undergone medical, neurological, psychiatric and neuropsychological screening. The screening measures included the Mini-Mental Status Examination (MMSE; Folstein, Folstein, & McHugh, 1975), the Dementia Rating Scale (DRS; Mattis, 1976), and the Clinical Dementia Rating (Morris, 1993). The clinical interview was videotaped and viewed independently by assessors who rated financial capacity as capable, marginally capable or incapable for each domain. The participant pool was divided into four groups: controls (MMSE = 29.3 ± 1.0 , DRS = 138.7 ± 3.8), mild cognitive impairment (MCI; MMSE = 28.2 ± 1.9 , DRS = 131.3 ± 7.4), mild Alzheimer's disease (mild AD; MMSE = 24.0 ± 3.1 , DRS = 114.0 ± 12.1), and moderate Alzheimer's disease (moderate AD; MMSE = 16.4 ± 4.2 , DRS = 90.7 ± 19.6). Consensus in inter-rater agreement was defined as 80%, which is to say four out of five assessors agreed on the patient's capacity. Inter-rater agreement was greatest for the control group (91%), followed by the MCI group (90%), and then the moderate AD group (84%). Consensus was lowest for the mild AD group (69%). The mild AD group also had the highest number of participants rated as marginally capable (37%). The limitations of this measure were that the cheque book management items are often obsolete in this population, with fewer than 10% of Alzheimer's disease patients undertaking this activity (Galasko et al., 1997), and that the scale does not relate to the specific decision being faced by a prospective patient. The estate arrangements sub-domain was only experimental in their research, and they did not include these results in subsequent analyses.

Brief cognitive screening measures

The relationship between cognitive and functional decline is established (Galasko et al., 1997; Tatemichi et al., 1994). Furthermore,

different aspects of the decision-making process recruit different cognitive abilities (Gurrera, Moye, Karel, Azar, & Armesto, 2006; Lui, Lam, Luk, Chiu, & Appelbaum, 2010). The goal of capacity research is to find the cognitive tests that best predict functional deterioration (Royall et al., 2007). For instance, cognitive ability has been shown to be a better predictor than other often investigated factors, such as regional brain volume, cerebrospinal fluid measurement or other risk factors when predicting decline from mild cognitive impairment to Alzheimer's disease (Gomar et al., 2011).

The MMSE is a commonly used cognitive screening measure. It takes 10–15 min to administer and gives a score out of 30, with lower scores indicating greater impairment. The domains assessed include orientation, registration, attention and calculation (Strauss, Sherman, & Spreen, 2006, p. 104). The test is sensitive to detecting moderate to severe dementia; however, it is of less utility in cases of mild cognitive impairment. Performance in the general population shows a decline from age 55 to 60 years, and again, more aggressively, from age 75 years (Strauss et al., 2006, p. 176). Despite this trend being independent of education level, there is a positive correlation between IQ and MMSE score. Normative data are available across the life span. For an outpatient disorder memory clinic, a cut-point of 26 predicts dementia with 93% probability.

Pachet, Astner, and Brown (2010) investigated the utility of the MMSE in predicting capacity. They retrospectively analysed data from 152 RCAT assessments that included patient groups of dementia, psychiatric illness and acquired brain injury. When they analysed the total sample, they found no main effects for education, gender, age or MMSE score; however, when they investigated the dementia group separately, there was a main effect of MMSE score only. MMSE score was found to have poor sensitivity¹⁵ in determining which patients lacked capacity; however, it had good

specificity with a cut-off of 19.5 points. This is to say that all patients with a MMSE score of 19 or lower, and some patients with higher MMSE scores, were found to lack capacity, indicating the measure was of limited value for higher performers.

Another cognitive screening measure is the Saint Louis University Mental Status Examination (SLUMS; Tariq, Timosa, Chibnall, Perry, & Morley, 2006). The SLUMS is an individually administered 11-item scale that also yields a total score out of 30. The SLUMS includes some original MMSE items, and new items on attention, calculation, memory recall, naming, digit span and clock drawing. It takes 5–10 min to administer. Tariq et al. (2006) compared the SLUMS with the MMSE on sensitivity and specificity in identifying cognitive impairment. The researchers recruited 705 participants ($M_{\text{age}} = 75.3$ years, $SD = 5.5$) who underwent a physical examination and laboratory procedures and completed both measures. To analyse their results, the researchers created separate participant groups based on years of education (high or low) and level of impairment (normal, mild cognitive impairment and dementia). The impairment groups were based on the Diagnostic and Statistical Manual of Mental Disorders, Text Revised, Fourth Edition (DSM-IV-TR; American Psychiatric Association, 2000) criteria. Results favoured the SLUMS over the MMSE in identifying mild cognitive impairment from normal functioning. Additionally, the study revised the SLUMS cut-off scores to maximise the sensitivity and specificity psychometric properties. They proposed the cut-off for mild cognitive impairment and dementia for low education levels to be 23.5 and 19.5, respectively. For the high education equivalent the cut-offs are 25.5 and 21.5, respectively. Item level analysis found that four items did not contribute to sensitivity or specificity: the current year, state currently in, identifying a triangle from two distractor shapes, or selecting the largest figure from three options.

Rutman and Silberfeld (1992) investigated the utility of the MMSE and the Cognitive Competency Test (CCT; Wang & Ennis, 1986) in predicting capacity. The CCT contains eight subtests: personal information, card arrangement, picture arrangement, memory, practical reading skills, management of finances, verbal reasoning, and route learning and orientation. The researchers interviewed the participants and their carers, reviewed available medical and mental healthcare history, and conducted psychometric assessments (MMSE and CCT). A multidisciplinary panel, including professionals from the fields of law, ethics and mental health considered 24 individual cases and gave a determination of capacity for each case. There was a general trend of participants with capacity scoring higher on the MMSE and CCT. However, when applying the test-stipulated cut-offs (75 for the CCT and 24 for the MMSE) the researchers found that some participants who scored below the cut-off actually had capacity (i.e. test specificity was unacceptable). Although the authors did not discuss this finding, when the management of finances subscale score is compared with the MMSE total score, there was an observable trend for those who scored lower on both to lack capacity, and those who scored higher on both to have capacity. A further limitation of this study was that it assessed participants across a range of domains (including self-care, choice of residence, choice of medical treatment, testamentary capacity, financial capacity, capacity to instruct counsel, to appoint an EPA, and to make a gift); however, a finding of incapacity in *any* area resulted in a final determination of incapacity. This is plainly inconsistent with the principle of domain-specific capacity. Finally, the panel ranked each source of information based on its usefulness in determining capacity and found the cognitive test results to be of minimal importance. Given the small sample size, a lack of domain-specific determinations and the absence of inferential statistics, it seems no firm conclusions about the utility of cognitive

testing could be robustly concluded from this study.

Marson, Cody, Ingram, and Harrell (1995) investigated the relationship between cognitive tests (including the MMSE) and capacity to consent to treatment, using a vignette method, in participants with Alzheimer's disease. The dependent variable was a component of the relevant legal standard: *the ability to provide rational reasons for treatment choice*. Their results found a univariate correlation (r) of .55 between MMSE score and capacity.¹⁶ Discriminant functional analysis revealed word fluency and simple attention to be the best predictors, correctly classifying 93% of cases.

Hooijer, Dinkgreve, Jonker, and Lindeboom (1992) compared the Abbreviated Mental Test Score (AMTS; Qureshi & Hodkinson, 1974), the MMSE, the Mental Status Questionnaire (MSQ; Kahn, Goldfarb, Pollack, & Peck, 1960), and the Short Portable Mental Status Questionnaire (SPMSQ; Pfeiffer, 1975) in predicting the presence of dementia. All tests purported to assess orientation, memory and general knowledge. They administered all four tests to a sample of 415 elderly persons. Where test items were similar across tests, they administered the most complex version first and omitted the rest if answered correct (i.e. if patient successfully completed serial 7s, they didn't have to answer serial 3s). The MSQ and SPMSQ tests correlated highly with each other ($r = .85$); however, the other tests had more modest correlations ($r = .37$ to $.51$). None of the tests emerged as superior in identifying participants suffering a dementia illness. They identified the same number of dementia patients, although there were some differences in which cases were acknowledged.

Other tests such as the Montreal Cognitive Assessment Test (MOCA; Nasreddine et al., 2005) exhibit similar problems. This problem is exacerbated when it is realised that the cut-off scores – sometimes called cut scores – employed to determine when an individual

does have capacity have changed since the test was developed and more data has become available as to diagnostic accuracy.

The Addenbrooke's Cognitive Examination, Revised (ACE-R; Mioshi, Dawson, Mitchell, Arnold, & Hodges, 2006) takes approximately 15 min to administer and assesses five cognitive domains; attention and orientation, memory, verbal fluency, language and visuo-spatial abilities. A total score is calculated out of 100, with higher scores being indicative of better functioning. A score of 88 out of 100 yields a sensitivity of 94% and a specificity of 89%. This test also has embedded relevant items to yield an MMSE score. To date, this test has not been used in capacity research; however, it does measure verbal recall, simple executive functioning and short-term memory, which have been shown to be sensitive to cognitive decline and changes in capacity (Earnst, Marson, & Harrell, 2000; Gomar et al., 2011; Kim, Karlawish, & Caine, 2002; Marson, Hawkins, McInturff, & Harrell, 1997).

General tests of intelligence

The Wechsler Adult Intelligence Scale, Fourth Edition (WAIS-IV; Wechsler, 2008) is used to assess the general thinking and reasoning skills of individuals aged 16–89 years. The Full Scale IQ score provides a general overview of thinking and reasoning skills and is composed of four indices: verbal comprehension, perceptual reasoning, working memory and processing speed. The verbal comprehension index provides a measure of how well patients do on tasks that require listening and verbal responses. The perceptual reasoning index requires a patient to examine and think about things such as designs, pictures and puzzles and to solve problems without using words. A patient's ability to attend to information, to hold and process it in memory, and to give a response is measured by the working memory index. The last index, processing speed, provides information about the ability to process visual information quickly and

efficiently. The WAIS-IV is the gold standard of ability assessment and is widely used as a general measure of intelligence, so extensive population data are available. However, the test does not address specific decision-making abilities and takes over an hour to administer.

The Kaufman's Brief Intelligence Test, Second Edition (KBIT-2; Kaufman & Kaufman, 2004) is a reliable and valid scale used to obtain a quick estimate of intelligence, including an individual's verbal and nonverbal intelligence. The KBIT-2 takes 15–30 min to administer and yields three scores: verbal, nonverbal and an overall score (IQ composite). The KBIT-2 correlates highly with the more comprehensive Wechsler Adult Intelligence Scale-III (WAIS-III; Wechsler, 1997a). For instance, the verbal scale on the KBIT-2 accounts for a high proportion of total variance on the WAIS verbal IQ ($R^2 = .66$) and verbal comprehension index ($R^2 = .67$). The nonverbal scale of the KBIT-2 accounts for a similarly high proportion variance on the WAIS performance IQ ($R^2 = .62$) and the perceptual organization index ($R^2 = .69$), and the KBIT-2 IQ composite score accounts for a higher proportion of variance on the WAIS-III full scale IQ ($R^2 = .79$). The KBIT-2 verbal scale contains two item types: verbal knowledge and riddles. The nonverbal scale is made up of a matrices subtest. A potential limitation of the KBIT-2 is that the normative data were gathered from a United States sample only, and several items are contextually related to United States history, potentially resulting in underestimating IQ in respondents from outside the United States.

Common practices

To understand current practices in conducting capacity assessments, 52 neuropsychologists responded (25% response rate) to a pen and paper survey (Mullaly et al., 2007). Results indicated that neuropsychologists spent up to a quarter of their professional practice conducting such assessments. The majority of assessments related to lifestyle decisions and

financial independence. The most common design of an assessment included taking a history, psychometric testing, reviewing relevant case notes and interviewing the patient. The most commonly used psychometric tests were subtests of the WAIS-IV (75%), specifically Digit Span, Arithmetic and Block Design. Subtests from the Wechsler Memory Scales (WMS; Wechsler, 1997b), such as Logical Memory and Information, were also often used, although research has found these to be very poor predictors of functional impairment (Royall et al., 2007).

When assessing executive function and attention the preferred tests were the Trail Making Test (TMT; Reitan, 1958) and Controlled Oral Word Association Test (COWAT). The COWAT is a verbal fluency test of a person's ability to make verbal associations to the letters C, F and L, taken from the Multilingual Aphasia Examination (MAE; Benton, Hamsher, & Sivan, 1994). The majority of respondents found decision-making capacity assessments to be some of the more challenging aspects of the neuropsychologist's role.

Summary of cognitive test practice/utility

There are many general cognitive tests available. The MMSE is normed with older populations, is quick to administer and has been used in previous research on capacity; however, it lacks sensitivity in cases of mild cognitive impairment, although it has a good specificity with a cut-point of 19.5 out of 30. There is also some concern about practice effects when this test is regularly administered to the same patient, which may result in meaningless results. The AMTS, MSQ and SPMSQ were found to be as similarly useful as the MMSE; however, they have not been used in research on capacity, and therefore data on sensitivity and specificity are not available. The SLUMS also has not been used in assessments of capacity; however, it is a better predictor of mild cognitive impairment than the MMSE. The ACE-R is a more comprehensive general

screening test, and yields a MMSE score as well as sub-scores on attention, memory, fluency, language and visuo-spatial abilities. Sullivan (2004) recommended the inclusion of a general cognitive test that is valid, reliable and normed with an older population. The WAIS-IV is a comprehensive assessment tool with psychometric properties and theoretical underpinning. Unfortunately, the test takes over an hour to administer, and is generally not used in dementia or capacity research. The KBIT-2 correlates highly with the WAIS-III and is much quicker to administer (at 15–30 min). There are available normative data for older populations. Taken together it seems the ACE-R and the KBIT-2 would form a time-effective battery and build on existing knowledge of cognitive correlates of capacity.

Measuring capacity in other medico-legal domains

Insights can also be drawn from research measuring capacity in other medico-legal domains.

Consent to research or treatment

A considerable number of investigations have been undertaken in the domains of consent to research participation and consent to treatment (i.e. Palmer & Savla, 2007). Dunn, Nowrangi, Palmer, Jeste, and Saks (2006) reviewed existing instruments across various domains. Comparisons were made across: cognitive processes measured (understanding, appreciating, reasoning and communicating); administration time; format; reliability; validity; and availability of normative data. The authors identified significant variations in the operational definitions of cognitive processes. For instance, the definition of reasoning varied between giving rational or reasonable responses to demonstrating consequential thinking. The construct of appreciation varied between stating the consequences, acknowledging the presence of a disorder, or the

absence of a false belief. The concept of understanding ranged from repeating the interviewer's instructions through to offering detailed evaluations about the information. For consent to participate in research, their analysis uncovered two effective instruments: the MacArthur Competence Assessment Tool for Clinical Research (Appelbaum & Grisso, 2001) and a vignette-based instrument (Sachs, Stocking, Stern, & Cox, 1994; Schmand, Gouwenberg, Smit, & Jonker, 1999).

The vignette-based decision-making protocol was first described by Vellinga et al. (2004) to compare carer and physician ratings of patient capacity to consent to treatment. The patients ($n = 80$) completed the MMSE, a depression questionnaire, tests of independent living and a hypothetical vignette. The vignette involved making a treatment decision about whether to undergo a surgical intervention (endoscopic procedure for anaemia, or surgery for colon cancer). Participants were scored as satisfactory, partially satisfactory or unsatisfactory based on their responses to questions related to understanding, reasoning and appreciation. Results indicated that physicians found fewer patients to lack capacity (4%) than carers (28%). There was disagreement in about one third of judgements. These same authors again investigated decision-making processes in real or imagined scenarios (Vellinga, Smit, Van Leeuwen, van Tilburg, & Jonker, 2005). They studied patients aged over 65 years with an MMSE above 16 points. There were two patient groups: One group was really facing the decision of an endoscopic procedure; the other group was presented with the hypothetical vignette of facing the procedure. The vignette was read aloud to the patient, with the patient being able to follow a written copy, and afterwards the participants answered questions relating to the decision. A capacity score was computed based on factual understanding, evidencing a choice, reasoning and appreciation of the situation. There were no significant differences between the real or imagined scenarios on demographic variables, MMSE

score or capacity score. However, when the groups were further divided into cognitively impaired or cognitively unimpaired participants using a MMSE cut-off of 23, significant differences were found. In the hypothetical scenario condition, the cognitively impaired participants performed significantly poorer on understanding, reasoning and appreciation. In the realistic group, a significant difference was only evidenced for the process of understanding. Cognitively impaired individuals were more likely to struggle with a hypothetical scenario than the realistic decision. This finding suggested that hypothetical situations may not be as useful as realistic scenarios in assessing decision-making capacity in elderly patients with cognitive impairment.

A recent study investigated the predictive ability of 27 cognitive tests in classifying capacity to consent to medical treatment using a vignette paradigm (Stormoen, Almkvist, Eriksdotter, Sundström, & Tallberg, 2014). Their sample included patients with Alzheimer's disease (AD), mild cognitive impairment (MCI) and healthy controls (HC). They used a Swedish linguistic instrument for medical decision-making (LIMD) to determine capacity. The cognitive tests included assessment domains of global cognition, linguistic competence, visuospatial functioning, working and episodic memory, executive function and attentional function. They found that the reading speed test (Järpsten, 2002) was the best predictor, accounting for 59.29% of the variance.

The role of training to enhance performance on capacity assessments was investigated using a vignette method (Baird, Solcz, Gale-Ross, & Blake, 2009). The study recruited cognitively intact older persons (mean age 73.7 years) to complete the Hopemont Capacity Assessment Instrument (Edelstein, 2000). This instrument assesses decision-making capacity in financial and health care areas. Results indicated that training participants in how to best demonstrate capacity when undertaking a decision-making assessment did not improve their performance. Interestingly, participants tended,

in general, to give less detailed answers. This was despite training to provide detailed responses. There was a tendency to focus only on the positive reasons behind decisions and to confuse some facts in the scenario.

Marson, Chatterjee, Ingram, and Harrell (1996) recruited 29 participants with probable Alzheimer's disease. They administered a range of neuropsychological tests and assessed consent to treatment using a vignette method. The relationship between neuropsychological functioning and capacity to consent was examined through univariate, stepwise and logistic regression analyses. Results indicated that understanding the meaning of the treatment situation was the most complex task, with 97% of participants being found incompetent on this variable. Measures of conceptualisation from the DRS and confrontation naming (Boston naming)¹⁷ were the best predictors of capacity ($R^2 = .81$). The Conceptualisation subtest of the DRS is composed of visual and verbal items relating to identities and oddities, similarities, priming inductive reasoning, differences, and similarities-multiple choice.

Looking at the issue from a different perspective, Marson, McInturff, Hawkins, Bartolucci, and Harrell (1997) interviewed patients with dementia about consenting to treatment. Physicians were shown the interviews and asked to rate the participant's capacity. There was a high level of disagreement (56%) among physicians in determining patient capacity. This study indicated that physician judgement from clinical interview alone is not a reliable standard for determining consent capacity. Marson, et al. (2000) found that educating physicians about the relevant legal standard improved inter-rater agreement. Pragmatically, there were some observations about using the vignette method. The researchers found it difficult to independently consider the four cognitive processes as the patient's responses tended to include a combination of the processes in one statement. A further difficulty was that patients often reflected on their own experiences and situation, rather than

relying solely on information provided within the vignette. One limitation of the study was that, for ethical reasons, participants in the realistic group received the information twice, once from their actual physician, relating to their specific decision, and again by the research interviewers, for the purpose of the study. To counter these limitations, future research should assess capacity at the same time as actual decisions are being made.

Markson, Dern, Annas, and Glantz (1994) asked Massachusetts interns, surgeons and psychiatrists ($N = 823$) to comment on capacity to consent to medical treatment. The vignette was based on an actual case where the psychiatrist made an error in applying the legal standard (as found by an appellate Court). The professionals were reminded of the legal test before making their own determination. Results showed that despite education about the legal test, professionals still applied them incorrectly. A common error was to assume incapacity due to a statutory reason (e.g. in the instance of dementia, depression, psychosis or being under an involuntarily treatment order).

Carer assessment

Another approach to capacity assessments is to ask family members or carers to report on patient capabilities. Although this is a popular choice, it lacks reliability and consistency (Lai & Karlawish, 2007; Stocking et al., 2008). Furthermore, the assessments are open to conflicts of interest and lack the detail required to comprehensively assess a patient's capacity.

The problem with relying on subjective estimates of capacity was considered by Mackenzie and Newby (2008). These authors assessed subjective report, cognitive performance and functional capacity in deciding where to live following stroke. The study specifically investigated whether the presence of executive dysfunction predicted capacity to decide. They hypothesised that general tests of cognitive capacity, along with patient age, sex, time since stroke or severity of stroke would not significantly predict a patient's capacity to

decide. Furthermore, they predicted that health professionals would not accurately predict the formal assessment outcomes. The cognitive test battery included: the Remembering Pictures, Naming and Unusual Views from the Middlesex Elderly Assessment of Mental State (MEAMS; Golding, 1989); name and address registration and recall; matrix reasoning and digit span from the Wechsler Adult Intelligence Scale, Third Edition (WAIS-III); verbal fluency (i.e. the FAS test where participants say as many words as they can beginning with the letters F, A and S) and Rule Shift from the Behavioural Assessment of Dysexecutive Syndrome (BADS; Wilson et al., 1996). Occupational therapists, physiotherapists and speech and language therapists gave their impressions of each patient's ability to decide where to live and to comment on whether they would routinely refer this patient for formal assessment.

A clinical neuropsychologist, blind to the cognitive results, administered a question-set in accordance with the relevant legal test and made the final determination of capacity. As a reliability check, the semi-structured interview was tape-recorded and subsequently rated by an independent clinical neuropsychologist (inter-rater reliability was 72%). The results indicated that general cognitive ability, patient age and dysphasia were not significant predictors of formal capacity determinations (Mackenzie & Newby, 2008). Furthermore, no cognitive test significantly predicted the formal capacity determination. Allied health professionals differed considerably in their opinions of capacity and often missed referring patients for formal assessment. Pivotaly, the majority of patients who lacked capacity were not identified by the professionals.

Kuriansky, Gurland, and Fleiss (1976) recruited hospitalised psycho-geriatric patients to investigate the relationships between objective, self-report and carer ratings of functional ability. Objective functional capacity was determined from patient files and results on the Performance Test of Activities of Daily

Living Test (PADL). Patients and carers were interviewed about the subjective assessment of the patient's functioning. There was 'little' association between objective and subjective report.

Professional judgement

It is uncontroversial that unstructured professional judgment has repeatedly been found wanting in assessments of psychological capacity in various areas over many decades (Coyle, 2011; Coyle & Halon, 2013; Coyle et al., 2016; Litwack, 2001; Monahan, 1981). And so it is when it comes to assessing legal capacity generally and testamentary capacity specifically.

Allied health professionals

To determine the accuracy of clinical judgement, Ruchinskis (2002) assessed 102 geriatric patients on cognitive tests and mood rating scales. Participants were interviewed by physical and occupational therapists, who were blind to the test results, and were asked to rate their impressions of cognitive and mood symptoms. The majority (65%) of patients with impairments were missed (false negative) by the clinicians. Professional judgement alone is a poor measure of a patient's capacity.

Medical practitioners

General practitioners, trainee psychiatrists, psychiatric nurses and specialist psychiatrists were asked to predict MMSE score from a series of five-minute recorded interviews of patients talking about their memory issues (Burns, Karim, Morris, & Byrne, 2010). On average, trainee psychiatrists (52.1% of correct predictions) were the most accurate, with the general practitioners being the least (correctly classifying only 36.4% of patients). Somewhat alarmingly, the more experienced professionals were less likely to identify the non-impaired functioning participants.¹⁸ Overall, the classification rate was quite low. Professionals correctly recognised 33.3% to

41.3% of the mildly impaired patients. There was also a general effect of underestimating the patients' cognitive ability. Assumptions about functioning derived from conversation can be misleading, and experienced practitioners are more likely to judge impairment where none exists. There is a need to administer cognitive tests when making a determination about cognitive impairment.

Legal practitioners

A survey of the practices of 302 Australian lawyers who were experienced in assessing capacity (average of 15.7 years of experience) found that 78.1% had requested a specialised opinion on capacity in the past year (Helmes, Lewis, & Allan, 2004). Of concern, only 20.9% of lawyers indicated that they asked their clients directly about reasons behind their decisions. To probe and document the understanding and appreciation of issues has been found to be a deterrent to future challenges of capacity and is integral to protecting a client's rights (Shulman, Cohen, & Hull, 2005).

Conclusions

The combination of an ageing population, an increase in the prevalence of dementia illnesses, and an increase in the complexity of financial and family structures has resulted in a need for scientifically validated protocols to assess decision-making capacity. Such a need has been formally recognised by relevant legislation, such as the *Powers of Attorney Act 1998* (Qld); however, these legislative changes have preceded research into effective and efficient assessment protocols. This is especially true as it relates to testamentary capacity and capacity to appoint an EPA. While there are guidelines available that detail the general approach to conducting capacity assessments, they neglect detail when it comes to selecting appropriate cognitive assessments. As Kapp (2015) recently commented: 'the

law seldom provides much meaningful guidance to health care and human services providers to assist them regarding the content of capacity evaluation' (p. 164). Even when an assessor administers a commonly used and well validated cognitive test, there is insufficient evidence linking these results to decisional capacity.

The seminal questions that capacity assessment research needs to answer are which cognitive tests (if any) best predict capacity and what testing protocol best adheres to scientifically and legally appropriate standards of evidence. The need for these answers were most succinctly stated by Marson, Hebert, and Solomon (2012) when they observed that '... there is currently no body of empirical research that can inform and advance the field ... this remains a key knowledge gap in neuropsychological forensic science ...' (p. 426). This situation has remained largely unchanged since the 1950s (Royall, 2002). There is a need for a new research paradigm that circumnavigates the limitations of vignette methods and the inaccurate reports of individuals, carers and professionals alike.

As noted at the start of this article, a gap between medicine/science and the law is open. How do practitioners actually determine a client's ability to weigh up options and reach a decision? Do they rely on a heuristic of common sense or some implicit assumption that an acceptable explanation is proof of sufficient functioning? Such a notion conflicts with the scientific evidence of professional judgements. Also, consider the instance where '... the impairment or disturbance leads to a patient making a specific decision without understanding or using the information they have been given' (Griffith & Tengnah, 2013, p. 251). It is undeniable in such circumstances that the additional evidence provided by cognitive functioning tests would surely be of assistance.

The reluctance of the law to adapt to the intricacies of human behaviour and evolve with scientific knowledge was commented on

by Bagaric and McConville (2005) in trenchant terms:

Another striking feature about evidence law and the process for resolving legal disputes is that it is one of the few areas of human endeavor that has not demonstrably become more sophisticated over the ages. As a result of advances in the biological, social and physical sciences we are now far better at curing illness and disease, building houses and bridges and communicating with each other. Standing outside this 'trend', is the law of evidence. The legal system has been highly successful at ignoring scientific advances in one of its most important activities – resolving disputes. There is no 'evidence' and in fact no reason to think that the legal system is now more effective or efficient at resolving legal disputes than it was 50, 100 or indeed 500 years ago. (p. 12)

In short, there is a dearth of research into the efficacy of commonly used cognitive assessment tools vis-à-vis legally accepted determinations of decision-making capacity as it relates to propounding a will and appointing an enduring power of attorney. Furthermore, many health care professionals who may be called on to conduct these assessments are unaware of the pertinent legal considerations involved. Similarly, legal professionals lack the expertise to clinically appraise decision-making deficits. The conflict that can arise as a result of these lacunae in the knowledge of professionals was pungently identified by Justice McClellan (2006) when he noted:

Law and psychology can be uneasy partners. The law has traditionally devised its own rules of human behaviour and created its own norms for interpreting that behaviour. Informed by little more than the appellate court's understanding and often classified under the rubric of 'common sense' judges are required to direct jurors in a particular manner on a whole range of subjects, with varying degrees of impact on the outcome of the trial – some more easily identifiable than others. (para. 18). . . . I doubt whether many psychologists realise the extent to

which the law operates upon assumptions which they may question or disagree with. (para. 65)

This is a problem that must be addressed. Leaving resolution of the determination of the cognitive capacity of testators and those executing enduring powers of attorney to the superior courts in the absence of contemporaneous, scientifically validated, assessment of the cognitive capacity of those executing such seminal legal documents will inevitably result in tying up of scarce legal resources as a direct result of the problems identified herein. This is to say nothing of the prospect of miscarriages of justice arising as a consequence of absent, invalid or corrupted expert evidence.

Ethical standards

Declaration of conflicts of interest

The authors have no conflict of interest.

Ethical approval

This article does not contain any studies with human participants or animals performed by any of the authors.

Notes

1. *Banks v Goodfellow* (1870) LR 5 QB 549.
2. *Banks v Goodfellow* (1870) LR 5 QB 549.
3. *Banks v Goodfellow* (1870) LR 5 QB 549, 551.
4. *Banks v Goodfellow* (1870) LR 5 QB 549, 551.
5. *Banks v Goodfellow* (1870) LR 5 QB 549, 552.
6. *Banks v Goodfellow* (1870) LR 5 QB 549, 552.
7. *Banks v Goodfellow* (1870) LR 5 QB 549, 554.
8. *Banks v Goodfellow* (1870) LR 5 QB 549, 566.
9. *Banks v Goodfellow* (1870) LR 5 QB 549, 565.
10. *Bull v Fulton* (1942) 66 CLR 295, 341.
11. *Woodhead v Perpetual Trustee Co Ltd* (1987) 11 NSWLR 267.
12. Competence is a legal term, indicating a court determination. Capacity refers to a

- professional's estimation of the likelihood that a court would find the patient incompetent on the basis of demonstrated decision-making performance (Appelbaum & Grisso, 1988).
13. At 199.
  14. At 206.
  15. The diagnostic accuracy of a test can be expressed in terms of specificity and sensitivity. Specificity is a measure of how accurate a test is against false positives (that is, the proportion of those who do not have a disease/condition that will have a negative result) while sensitivity is essentially how good a test is at finding something (that is, a disease/condition). Diagnostic accuracy (that is, sensitivity and specificity) is only one part of the equation that describes the efficacy of a diagnostic instrument. The other part is predictive power, which depends on both diagnostic accuracy and the prior probability (that is, prevalence, or base rate) of the disease/condition being tested for. Predictive power involves the conjoint consideration of the diagnostic accuracy of attest and the underlying base rate of any particular conditions such as lack of testamentary capacity. Coyle and Halon (2013) note that a more comprehensive way of looking at the problem is to consider the relationship between the positive predictive values (PPVs) and negative predictive values (NPVs) and base rates. PPVs identify the accuracy with which risk of any condition/diagnosis may be ruled in: they are calculated by dividing the number of true-positive predictions (TP) by the number of true-positive predictions plus the number of false-positive predictions (FP). Thus, $PPV = TP / (TP + FP)$. NPVs identify the accuracy with which risk of any condition/diagnosis may be ruled out: They are calculated by dividing the number of true-negative predictions (TN) by the number of true-negative predictions plus the number of false-negative predictions (FN). Thus, $NPV = TN / (TN + FN)$. As the base rate of any disease/condition, or any other event for that matter, increases, PPVs also increase while NPVs decrease. Conversely, as the base rate of some event decreases, PPVs decrease, and NPVs increase. These statistical considerations have profound consequences vis-à-vis the predictive power of tests employed to determine testamentary capacity but they are beyond the scope of this paper.
  16. The amount of total variance accounted for by a correlation coefficient is determined by the square of the correlation coefficient. This product, the coefficient of determination, is usually ignored in scientific publications, with inimical consequences. By way of example, if the Spearman rank correlation coefficient is .64 – the approximate correlation coefficient between height and weight in many 'first world' countries – then the amount of total variance accounted for is only 41%. This is a very poor basis on which to make predictions since it is, by definition, less accurate than tossing a coin.
  17. The Boston Naming Task is a confrontation-naming task where participants are asked to name 60 drawn items.
  18. This same effect exists in other forensic domains, such as detecting deception, where more experienced professionals are often less accurate but more confident. (See, for example: Coyle & Thomson, 2014; Ekman & O'Sullivan, 1991.)

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