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Mapping dementia and cognitive decline in testamentary capacity

Kelly Purser[a,*], Jane Lonie[b]

[a] Australian Centre for Health Law Research, Faculty of Law, Queensland University of Technology, Brisbane, Australia
[b] Wellview Consulting Rooms, North Sydney, Australia

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ABSTRACT

Cognitive assessment is central to the evaluation of testamentary capacity. Such assessment is currently performed in a subjective, unreliable and non-standardized manner. Dementia, a cognitive illness, poses one of the largest threats to testamentary capacity in modern society. A better understanding of the ways in which dementia related cognitive impairment can affect a testator's ability to meet the relevant legal criteria to make a will is needed. A review of the literature over the past ten years focusing on what cognitive abilities are required to satisfy the legal criteria for testamentary capacity has highlighted an alarming scarcity of work in this area. There is little discussion spanning beyond general acknowledgement of the importance of memory and executive function. The specifics of how cognitive impairment impacts the four limbs of *Banks v Goodfellow* are rarely addressed. Several additional areas of cognitive function of importance to assessing testamentary capacity are the subject of this article.

1. Introduction

Incidents of mentally disabling conditions are increasing and the extent to which these conditions can, and do, affect testamentary capacity is not generally well understood by either the legal or the health professionals involved in such assessments. Of these mentally disabling conditions, dementia poses one of the largest threats to testamentary capacity in modern society (Merikangas, 2015; Shulman, Cohen, & Hull, 2005). As a cognitive illness, dementia impacts directly on the cognitive abilities required to be able to make a valid will. Cognitive assessments are therefore a fundamental aspect to the satisfactory determination of testamentary capacity. These assessments must occur within the appropriate legal framework as capacity is ultimately a legal determination, effectively highlighting the need for a transdisciplinary approach.[1] Such assessments, however, are currently undertaken on a subjective, unreliable and non-standardized basis, being reliant upon the expertise of the individual assessor(s).

That best practice guidelines are needed is not disputed (Purser, 2017). What will also greatly assist in ensuring satisfactory assessments is a better understanding of the ways in which dementia related cognitive impairment can affect a testator's ability to meet the legal criteria necessary to make a valid will. This is the focus of this article. Such knowledge is critical to effectively map cognitive decline against the legal requirements to ensure satisfactory assessments are occurring. It is also significant in the retention of individual autonomy because being able to make a valid will is the final determination of what is to happen to a person's property upon his/her death - a fundamental autonomous action.

Although the magnitude of the threat dementia poses to an individual's legal decision-making ability is widely accepted, somewhat surprisingly, the actual effects that the condition can have upon financial capacity more broadly, and testamentary capacity specifically, are not well understood. Further compounding the challenges in this complex, under-researched and misunderstood area is the fact that there are distinct dementias which give rise to differing types of cognitive loss, and different stages at which dementia can be diagnosed. This then has diverse effects upon a person's cognition and, consequently, their ability to make a valid will.

Growing awareness of the variable means by which the different forms and stages of dementia may affect thinking abilities has made the assessment of testamentary capacity increasingly complex (Liptzin, Peisah, Shulman, & Finkel, 2010, p. 950). The initial symptoms of the vast majority of dementias are cognitive (Alzheimer's Australia, 2009, p. 5). Cognitive decline begins several years prior to the point at which

* Corresponding author at: C/- School of Law, Queensland University of Technology, GPO Box 2434, Brisbane, QLD 4001, Australia.
E-mail address: k.purser@qut.edu.au (K. Purser).

[1] For a good example of interdisciplinary guidelines see: British Medical Association and the Law Society, (2015); American Bar Association Commission on Law and Aging & the American Psychological Association, (2005); American Bar Association Commission on Law and Aging, American Psychological Association and National College of Probate Judges & the American Psychological Association, (2006); American Bar Association Commission on Law and Aging and American Psychological Association, (2008).

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dementia can be detected by a general practitioner or a specialist, and this, coupled with the lack of sensitivity of commonly used cognitive screening measures such as the Mini-Mental State Examination (MMSE), can be problematic in evaluating testamentary capacity (Folstein, Folstein, & McHugh, 1975). This difficulty is further exacerbated by misconceptions which can exist amongst legal and health professionals about the ability of certain measures, such as the MMSE, to accurately assess the relevant capacity in question. Concerns for patient autonomy as well as practitioner liability thus highlight the imperative to ensure, as best as possible, the accuracy of the assessment, both process and outcome, and that 'best practice' is observed. Given the multitude of different guidelines claiming to be the 'best practice', this is an expanding professional minefield for legal and health practitioners.

Irrespective of the particular approach, the satisfactory cognitive evaluation of testamentary capacity will require the assessor(s) to: firstly establish the cognitive capabilities and limitations of the testator; and, secondly, to determine the impact that any identified cognitive limitation(s) may have on a testator's capacity to execute a legally valid will in a voluntary manner. It is essential that the impact of the mentally disabling condition be evaluated within the requisite legal framework. This, in turn, depends upon the *sensitive*, *objective* and *reliable* assessment of a testator's cognitive function in relevant areas of thinking and an understanding of the cognitive demands underpinning the legal criteria originally established in Banks v Goodfellow (1870) (*"Banks")*. Two questions thus arise. Firstly, what cognitive abilities are required to satisfy the *Banks* criteria for testamentary capacity in the context of a particular mentally disabling condition, here, dementia? Secondly, how might these cognitive abilities be adequately and *reliably* assessed within the requisite legal framework, whilst recognising the need to tailor the assessment to individual circumstances?

This article critically explores the first of these questions, that is, what cognitive abilities are required to satisfy the *Banks* criteria for establishing testamentary capacity in the context of dementia. Given the incidents of dementia and the importance of capacity to exercising autonomous decisions recognisable at law, a literature review revealed a surprising scarcity of information mapping the cognitive markers of dementia to the requisite legal framework. Consequently, in exploring this issue the legal test for testamentary capacity will be discussed, as will some of the problems presented by dementia in this context. The intersection between law and health will then be examined, including some of the difficulties arising from this necessary multidisciplinary intersection. Comments on existing cognitive screening measures will be made, specifically in relation to the misplaced reliance on the MMSE as being determinative of legal capacity. Finally, a critical discussion will be undertaken of the cognitive deficits arising from dementia and how they track against the legal standard required to make a valid will.

2. Testamentary capacity at law

In Australia and the United Kingdom, the legal test establishing the testamentary capacity necessary to make a valid will was set out in 1870 in the four limb test from *Banks*. Basically, the law requires that a testator understand firstly, the nature and effect of a will, and second, the content and value of his/her estate (Read v Carmody, 1998). The general requirement for a testator to demonstrate an understanding of the nature and extent of his/her estate takes into consideration the increasingly multifaceted nature of personalty, property ownership and the preparation of the will, that is, the greater the complexity of the will the higher the level of capacity required (Shulman, Peisah, Jacoby, Heinik, & Finkel, 2009). Third, the testator should be able to appreciate the claims of potential beneficiaries. Finally, the testator should not suffer from a disorder of the mind affecting the distribution of his/her assets. That is, s/he has to have the capacity to both give instructions for, and to execute, the proposed will (Frost, Lawson, & Jacoby, 2015, pp. 40–48; Parker v Felgate, 1883; Bailey v Bailey, 1924, pp. 567 & 572). It is this fourth element which forms the focus of this article.

There is some contention as to whether a lower test for capacity should be applied for a codicil (D'Apice v Gutkovich, 2010; Frost et al., 2015). This is a logical proposition considering that more complex testamentary dispositions require a higher standard of capacity. Generally, the capacity necessary to make a will is both task/decision and time specific subject to the individual testator, assets and estate planning (Jacoby & Steer, 2007, p. 155; Shulman et al., 2009, p. 434; Marson, Huthwaite, & Hebert, 2004, p. 82). The relevant time is usually when the will is executed. However, if instructions were given on a day preceding the execution of the will, or the testator loses capacity between giving instructions and executing the will, the relevant time is deemed to be when the instructions were given (Bailey v Bailey, 1924, p. 567 & 572). A significant point, seemingly not widely understood by health professionals, is that legal professionals have a duty to act on coherent instructions (Jacoby & Steer, 2007, p. 156). That is, unless a client *clearly* lacks the requisite capacity, a legal practitioner will generally be required to prepare a will. This is as a result of not only the duty to do so, but also as recognition of the fact that it is ultimately the court's decision as to whether the individual has testamentary capacity or not.

The four limb test from *Banks* has changed relatively little. It should be noted however, that there is some contention in the United Kingdom about the effect of the *Mental Capacity Act 2005* on the *Banks* test (Frost et al., 2015, pp. 55–63). Although, it does seem that the *Banks* test is still applicable outside the Court of Protection (Walker v Badmin, 2014). A review of the adequacy of the test for testamentary capacity is being undertaken by the Law Commission and final recommendations are forthcoming.

3. Dementia

Dementia is generally defined as a progressive, degenerative impairment of cognitive and functional abilities, as well as behavioural, personality and emotional change. It comprises a group of chronic degenerative cognitive conditions as reflected by its placement with the neurocognitive disorders section in the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2013). One of the most common forms of dementia is Alzheimer's Disease. Other types include: vascular dementia; dementia with Lewy bodies, which is associated with the early development of hallucinations; and Pick's disease, which, as a result of its primary impact on executive function, can result in loss of capacity in the face of well-preserved memory and language abilities (O'Neill & Peisah, 2011, p. 3).

Dementia symptoms can be cognitive, emotional or behavioural and can include, for instance, a decline in memory, reasoning, communication, the capability to perform daily living tasks, and/or the experiencing of paranoid delusions (Alzheimer's Australia, 2009, p. 5). Dementia is associated with a progressive loss of thinking ability and associated functional decline. However, a diagnosis of dementia does not automatically equate to a loss of capacity and incapacity may be reversible with appropriate medical interventions or addressed with the appropriate cognitive aids. The confusion experienced by dementia sufferers can be worsened by medications and/or other acute illnesses or indeed his/her environment (Frost et al., 2015, p. 8).

The dementia statistics are confronting. At the outset, however, it must be noted that although dementia is more common in older cohorts, age in and of itself is neither determinative of dementia nor a loss of capacity. To assume otherwise promotes ageism. It is estimated that 44 million people worldwide have been diagnosed with dementia and that this figure will nearly double by 2030 (UK Government, 2015). Two statistics are particularly telling in the testamentary context: firstly, it is anticipated that one in three people over the age of 65 years will die with a dementia diagnosis (Lin & Lewis, 2015); and second, people aged 55 years and over fear being diagnosed with dementia more so than any other disease (UK Government, 2015). Dementia

therefore cannot be ignored when taking instructions to prepare a will. If a testator was diagnosed with a dementing condition, the court needs to be satisfied that the cognitive impairment resulting from the illness did not affect testamentary capacity at the relevant time. Given the increasing incidents of dementing illnesses, requests to health professionals from legal professionals to participate in capacity assessments are increasing, and will only continue to do so. Assessments of testamentary capacity are carried out by a range of different health practitioners including geriatricians, neuropsychologists, psychiatrists, neurologists and general practitioners, who have both overlapping and unique skill-sets. Part of the difficulty in assessing testamentary capacity is identifying which health practitioner a legal practitioner should engage.

4. The legal and health juncture

However, even before identifying an appropriate health practitioner for a clinical capacity assessment, how is a legal practitioner to determine if a client has dementia, especially if the client is not forthcoming or insightful about the diagnosis? Let alone having to assess the effect of this on the individual's testamentary capacity in the specific circumstances? Further questions then arise, of: firstly, how to assess capacity in the absence of a gold standard measure; and, second, how to conduct such a clinical assessment within the relevant legal framework? Simply referring the matter to a health professional is not an effective solution, nor best practice. 'Best practice' guidelines for assessing testamentary capacity are commonly proposed by both legal and health professionals, as well as their insurers.[2] One problem is the number of guidelines, and that each proposes a slightly different practice as the 'best'. Guidelines proposed by the health professions often include cognitive evaluation as a central component (Jacoby & Steer, 2007; Liptzin et al., 2010; Moye, Marson, & Edelstein, 2013; New South Wales Attorney General's Department, 2008; Shulman et al., 2009; Shulman, Cohen, Kirsh, Hull, & Champine, 2007; Sousa, Simões, Firmino, & Peisah, 2014). This is both appropriate and necessary to accurately determine the effect of a mentally disabling condition upon the requisite legal test. However, the guidelines generally do not address the practical manner in which a testator's cognitive functioning should be assessed, nor do they sit within the relevant legal framework - a fundamental problem when the assessment of capacity is ultimately a legal determination.

Further complicating matters, dementia sufferers can give the impression that they are functioning at a higher level than they really are (Moye et al., 2013, p. 163). They can also lack insight into any cognitive changes which then negatively impacts their ability to correctly communicate relevant information. Consequently, independent evidence is often vital in the assessment process. However, the individual whose capacity is in question may either lack capacity to give the necessary authority to speak to a third party or may not want to. It is therefore vital to ensure the integrity of the assessment process through not only the use of best practice guidelines, but also that any clinical assessments are conducted within the relevant legal framework. A multidisciplinary approach utilising the skills and expertise of both health and legal professionals is therefore fundamental to ensure that this is satisfactorily undertaken.

[2] See, for example: British Medical Association and the Law Society (2015); American Bar Association Commission on Law and Aging and the American Psychological Association (2005); American Bar Association Commission on Law and Aging, American Psychological Association and National College of Probate Judges & American Psychological Association (2006); American Bar Association Commission on Law and Aging & American Psychological Association (2008); New South Wales Attorney General's Department (2008); Law Society of New South Wales, (2016); Queensland Law Society, Allens Linklaters & Queensland Advocacy Incorporated, (2014); See also: Sullivan, (2004, p. 137); Berg, Appelbaum & Grisso, (1995–1996, pp. 349–51).

Importantly, the involvement of a range of different disciplines in the assessment of testamentary capacity has opened up the assessment practices to wider scrutiny. The intersection of the legal and health professions has also highlighted terminological challenges which can make effective communication between professions problematic. For instance, the term 'lucid interval' has been referred to as a legal 'term of art' and whilst having a meaning at law, does not have a correlating meaning for a health professional (Sprehe & Kerr, 1996, p. 255). The relevance of the 'lucid interval' to testamentary challenges in dementia has also been questioned (Shulman et al., 2015). Practical difficulties arising from the terminological idiosyncrasies of the professions can impede best practice. Consequently, an increasing number of health and legal practitioners are recognising the need for the use of consistent and universal definitions (Sousa et al., 2014). Such definitions should be firmly based within the requisite legal framework but also incorporate current medical innovation to help ensure that it is the *best* evidence available. There is emerging recognition that advances in neuroscience in particular have a key role to play in capacity assessment. For example, empathy and theory of mind in dementia, and the neuroanatomical underpinnings of decision-making (Merikangas, 2015; Rolfe, 2016).

In addition to widened scrutiny of the methods by which testamentary capacity is being assessed, it is becoming increasingly necessary for legal professionals to expand their knowledge about the effects that mentally disabling conditions, such as of dementia, can have on testamentary capacity. In doing this, the ability of the law to effectively engage with medical evidence adduced about testamentary capacity will further develop and will then, in turn, improve the quality of the medico-legal evidence being presented (Purser, 2015; Shulman et al., 2007). Increased knowledge amongst legal professionals of the cognitive effects of different forms and stages of dementia, as well as about the unique skill set of the different health disciplines, will facilitate the appropriate selection of a health expert.

5. Cognitive screening measures

Closely connected to the selection of appropriate assessors is the ability of both the health and legal professionals to select an appropriate assessment methodology. This also includes being aware of measures which are not satisfactory as a determinant of testamentary capacity, most notably, the MMSE. Cognitive assessment in the evaluation of testamentary capacity has traditionally included administration of the MMSE, which is one of the most commonly used cognitive screening examination tools in the world (Folstein et al., 1975; Shulman et al., 2007). The MMSE provides an indication of whether or not a testator's overall level of functioning is less good than it should be, on average, for his/her age (Folstein et al., 1975). It does not allow for the reliable determination of a testator's capabilities in different areas of cognitive function (as set out within the neurocognitive disorders section of the DSM-V) (American Psychiatric Association, 2013). Further, cognitive screening measures lack sensitivity to mild cognitive impairments and to cognitive impairment of an executive nature, both of which are prominent, early symptoms in dementia (Kennedy, 2012; Lonie, Herrmann, Donaghey, & Ebmeier, 2008). For example, a person can score very well on the MMSE but may nevertheless lack capacity because of a frontal lobe impairment which has diminished the person's judgment and reasoning abilities, which is not tested for in the MMSE (Shulman et al., 2007). In light of the well-documented insensitivity of the MMSE to executive impairment, its widespread use in capacity evaluation is concerning.

The limitations that apply to the MMSE are not isolated. More comprehensive cognitive screening measures such as the Addenbrooke's Cognitive Examination-III (ACE-III) and the Montreal Cognitive Assessment (MoCA), which comprise subscale scores for specific areas of cognitive functioning, should also not be relied upon as being determinative of testamentary capacity. This is because they were not

developed to assess the effect of a particular dementing illness on the particular legal standard (Hsieh, Schubert, Hoon, Mioshi, & Hodges, 2013; Nasreddine et al., 2005; Smith, Gildeh, & Holmes, 2007). The reliability of the ACE-III and the MoCA subscales is unknown generally let alone in this specific context, and the normative base from which interpretation of subtest results occurs is extremely limited in the case of the ACE-III and non-existent in the case of the MoCA (Hsieh et al., 2013).

Consequently, despite the central role of cognition in testamentary capacity, current methods of cognitive assessment do not adequately address the effect of the specific type of dementia on testamentary capacity. There is no standardized screening measure able to be determinative of capacity in the face of any mentally disabling condition. Compounding this problem is the fact that there is limited evidence as to what cognitive abilities marry up to the legal test. This is especially difficult given that dementia is one of the most commonly encountered mentally disabling conditions and that testamentary capacity challenges usually arise from concerns about cognitive function (Lonie & Purser, 2017; Merikangas, 2015; Shulman et al., 2005).

6. Cognitive domains

The question thus arises, what cognitive abilities are required to satisfy the *Banks* criteria for testamentary capacity in the context of dementia? With the exception of the role and importance of executive function, there is little literature mapping the cognitive markers for dementia directly against the relevant legal framework. Given the increasing transdisciplinary approach to assessing testamentary capacity, the dearth of relevant literature is not only surprising but also concerning. It is generally accepted that a multidisciplinary approach to assessing capacity is necessary but that there are practical problems with how these assessments are being conducted – not least because of the confusion occurring between the legal and health professionals conducting the assessments (Purser & Rosenfeld, 2014). Whilst guidelines are imperative to informing best practice, mapping the effect that the cognitive markers of dementia have on the legal capacity in question can further assist in not only helping to establish best practice, but in also aiding in the production of the best evidence where incapacity is alleged to invalidate a will. The primary cognitive domains identified in the DSM-V will now be discussed and then framed with reference to the four limbs of the legal test for testamentary capacity contained in *Banks* (American Psychiatric Association, 2013).

6.1. Complex attention

Within the DSM-V, the cognitive domain of complex attention is said to comprise the abilities to maintain attention over time; direct attention or attend in a selective manner to something whilst ignoring something else; and to attend to two tasks within the same time period, or to divide attention back and forth between more than one line of thought (American Psychiatric Association, 2013). The adverse impact of impaired attention on testamentary capacity has been highlighted within the context of delirium and more recently, the so-called 'lucid interval' in dementia (Shulman et al., 2015). Delirium is present in up to 20% of dementia outpatients (Hasegawa et al., 2013). Low-level attention and arousal, disruption of which are the hallmarks of delirium, are necessarily present to support the higher-level cognitive components of will-making, that is, executive, complex language, and memory functions. Low level attention and arousal levels are, in this sense, important to assess, particularly within the contextual environments of dementia, medical ill-health and polypharmacy, where delirium commonly occurs (Peisah et al., 2014).

It has more recently, however, been suggested that the impact of the legal notion of the lucid interval on testamentary capacity may be unique to delirium and therefore of limited relevance to the determination of testamentary capacity in dementia (Shulman et al., 2015). In dementia, any brief lapses in attention and alertness occurring as a result of a co-morbid delirium do so on a backdrop of longer-standing *progressive* impairments of higher-level cognitive function that are of far greater adverse import to testamentary capacity. The underlying higher level cognitive deficits that accompany dementia do not wax and wane, but rather worsen in a progressive manner with disease advancement (Shulman et al., 2015). Consequently, the tradition of applying the concept of a lucid interval as a means of warding off claims of incapacity in testators who suffer with dementia is, in this sense, flawed. The existence and use of the notion of a 'lucid interval' must now be carefully considered in the increasingly transdisciplinary world of capacity assessments. This is especially the case given that delirium is now recognised as a separate entity from dementia (Hasegawa et al., 2013). Further, this also serves to emphasise the differences between advances in neuroscience and the law, and the need for better understanding and communication between legal and health professionals when seeking to satisfactorily assess testamentary capacity (Rodgers & Baird, 2015).

6.2. Executive function

The important adverse impact of executive impairment on testamentary capacity is widely acknowledged, as is the need for this aspect of a testator's cognitive function to be vigilantly examined because of its tendency to modify understanding, appraisal, awareness, decision-making, inhibition and reasoning (Kennedy, 2012; Shulman et al., 2015; Sousa et al., 2014). Executive functioning is said to comprise the cognitive functions of planning and decision-making; working memory or the ability to hold information in mind whilst mentally manipulating it; responding to feedback and/or error correction, including the ability to adapt or alter a usual pattern of behavior in accordance with a changed environment; overriding habits and/or inhibition or the ability to hold back or override a primed response; mental flexibility or the ability to think in different ways about something or to change one's line of thinking; and, initiation or the ability to generate thoughts or action (American Psychiatric Association, 2013). In clinical practice, the ability to reason about things in abstract or hypothetical terms is another commonly assessed executive function.

In dementia, when the capacity for abstract thought is lost, thinking becomes increasingly stimulus bound, concrete and literal. The executive functions of complex decision-making and reasoning have also been highlighted as being of particular importance to the testator's ability to demonstrate a rationale or reasoning base for his/her decisions, and for any differences between an old and a new will (Peisah et al., 2014; Shulman et al., 2007). Executive ability is of further purported relevance to a testator's ability to appreciate his/her circumstances and the impact of the distribution of his/her assets, particularly where the estate and distribution thereof is complex (Shulman et al., 2007).

Empirical findings show that deficits in encoding, that is, the ability to take in new information and higher order processing (or executive functioning) affect an individual's ability to understand the relevant facts of a situation, the choices that are available to him/her and the consequences of such choices (Shulman et al., 2005). Executive dysfunction in mild to moderate Alzheimer's disease has been shown to correlate with impairment in the ability to provide rational reasons for choices and to identify the consequences of a particular choice (Shulman et al., 2005). In testamentary capacity, this is particularly important in two circumstances. Firstly, where there is a dramatic change in the will from previously expressed wishes, or secondly, where the testator is faced with a number of diverse possible methods of distributing his/her estate that are associated with quite different consequences for the relevant beneficiaries.

6.3. Learning and memory

Neuro-scientific evidence demonstrates the existence of multiple memory systems, or neuronal networks, supporting a range of different memory functions. These comprise, amongst others, the different types of memory listed within the DSM-V. Immediate memory refers to the ability to remember new information immediately after it has been presented. Recent memory refers to the ability to remember information or events from the recent past, for example over a period of minutes, hours, days or months. Very-long-term memory refers to the ability to recall details and/or events from the more distant past. These include those relating to an individual's own personal past (autobiographical memories), as well as an individual's knowledge of objects and their properties or functions, and the meanings of concepts and words (semantic memory). Each of the above memory systems may be accessed in a number of different ways. For instance, information may be recalled freely from a memory store, recall of information may be prompted or cued or, alternatively, information may be recognised only *after* it has been presented.

Failure of the recent memory system is the earliest and most prominent symptom of Alzheimer's disease. Recent memory, or the ability to learn and retain information from the recent past, for example minutes, hours, days, weeks, months, and several years, facilitates formulation of an understanding of the extent and composition of one's estate, as well as the potential beneficiaries (Shulman et al., 2009). With this understanding, rational decisions about estate distribution can then occur. Consequently, recent memory function is of particular importance where significant alterations to the estate either in value or beneficiaries occur following the onset of dementia. This is because, from this time onwards, the testator will find it increasingly difficult to both acquire, and retain, the details of the estate that have changed. Without knowledge of the content and approximate value of one's estate, and without the ability to acquire such knowledge and retain it beyond the immediate term, it is more difficult and, in some cases, not possible, for the testator to arrive at a reasoned and rational decision about the distribution of the estate. Where limitations in a testator's recent memory and new learning abilities are identified, it may be possible to assist a testator in recalling the extent and nature of his/her estate for long enough to establish a rationale for any testamentary dispositions (Shulman et al., 2007). A more detailed understanding of which systems and aspects of memory function are intact and impaired in a testator is helpful where facilitating, or compensatory, approaches are required to realise a testator's testamentary capacity. This is likely to become an increasingly important component of capacity assessments with the paradigmatic shift towards supported decision-making models.

There is a need for a testator to show an awareness of his/her previous beliefs, values and wishes in order to provide a rationale for the latest will (Bull v Fulton, 1942). A testator's knowledge of the content of any existing previous wills, the wishes expressed therein, and the beliefs as well as the values that formed the basis for those wishes at the time the will was made is, in turn, reliant upon the integrity of the testator's recent and/or longer-term memory function. Although, this does depend on the point in time in the past that any previous will(s) were made. Without knowledge of the content of any existing wills it may be more difficult for the testator to provide a rationale for changing his/her testamentary dispositions. Furthermore, it begs the question of what, or who, prompted a testator to make alterations to his/her will in the first place.

Depending on the circumstances, this can then raise issues of undue influence and elder abuse. Health professionals are increasingly being asked whether diminished capacity can make an individual more or even less susceptible to undue influence. It should, however, be noted that in order to be unduly influenced, a testator's free will has to be, traditionally, overborne, or there needs to be coercion (Boyse v Rossborough, 1857; Nicholson v Knaggs, 2009; Wingrove v Wingrove, 1885). Significantly, it is the testator's will that is the focus. If a testator lacks capacity to make a will then they lack the capacity to have their will overborne. Testamentary capacity and undue influence are indeed closely related and evidence of either will cause the court to closely examine an otherwise prima facie valid will. Nevertheless, capacity and undue influence are distinct concepts at law, a fact that can often be misinterpreted by health and legal professionals who can conflate the two. This can then effect any capacity assessment which is being undertaken.

6.4. Language

Communication remains relatively well preserved in mild to moderate Alzheimer's disease. Consequently, language impairment, in and of itself, is unlikely to give rise to a loss of testamentary capacity (Shulman et al., 2005). However, in the late stages of Alzheimer's disease, the presence of receptive and expressive aphasia and semantic memory loss is considered likely to affect a testator's ability to understand even relatively simple choices and, in this manner, language impairment may undermine testamentary capacity (Shulman et al., 2005).

It is within the context of the non-Alzheimer's disease type dementias, particularly the primary progressive aphasias, where language impairments may have considerable impact on testamentary capacity *or indeed the perception thereof*. Such language impairments can include the ability to express one's thoughts and wishes and to understand the facts upon which a decision is based, as well as the various options that are available and to hold these in mind long enough to weigh them up. When expressive language difficulties are present in dementia, they are usually accompanied by some, all be it a lesser degree of, comprehension difficulty. A testator with primary progressive aphasia, for example, may present with a profound inability to find the words to express how he/she wishes to distribute his/her estate, yet *appear* to follow and understand what is being said by others. Careful examination will invariably uncover some lesser degree of comprehension loss, manifesting as difficulty in comprehending lengthy, multi-part and/or syntactically or grammatically complex information (Stenclik, Sperling, & Manning, 2015). In such cases, it is crucial for the assessor to determine whether it is comprehension or communication that is the primary deficit (Shulman et al., 2009). Alternative means of assessment and communication may then need to be established, and may also prove necessary in facilitating the capacity of the testator (Barry & Lonie, 2014). Further emphasising the difficulty with relying on the MMSE as being determinant of capacity, it is heavily loaded for verbal ability. Consequently, it cannot be used as a valid and accurate indication of a person with aphasia's general level of cognitive functioning (Folstein et al., 1975). Even when alternative means of communicating are established in order to assess cognitive function, the difficult nature of assessing executive functions in aphasia, and determining the extent to which cognition may or may not be impaired, are widely acknowledged (Ferguson et al., 2003).

The role of language function in testamentary capacity can also be seen in the requirements that the testator both *understand* information that is relevant to a choice and the reasons for making a choice, as well as being able to *communicate* the choice and the reasons for it. In examining language function in practice, the language subtest of the CAMDEX-R has been found to be the most accurate single cognitive domain predictor of testamentary capacity in 74 mild-severe AD patients, predicting the status in 84% of patients where the British Medical Association and the Law Society guidelines based interview was used as the ‘gold standard’ for testamentary capacity (Roth, Huppert, & Mountjoy, 1998). It is conceivable, however, that the high predictive validity of the language component of the CAMDEX-R in this study is attributable to the common emphasis on language within the ‘gold standard’ interview based assessment approaches. That is, the study findings may simply reflect a language based *perception of*

capacity, or loss thereof. Further empirical research is needed in this area to accurately map the role of language function in satisfactorily assessing testamentary capacity.

Handwriting can also be used as a tool in assessing the extent of any language impairment as a result of dementia. Problematic is the fact that handwriting generally forms a minimal role in the formulation of a modern day will. Nevertheless, samples of a testator's handwriting are sometimes available for examination in a retrospective analysis of testamentary capacity. In these cases, qualitative features of handwriting, such as spelling, verbal and lexical skill, and spatial positioning have been found to predict overall levels of cognitive impairment, as defined by performances on two cognitive screening measures (MMSE and the Milan Overall Dementia Assessment Scale) (Balestrino et al., 2012). The problems with the MMSE must again be noted, however, along with the fact that very good writing performance was not always indicative of preserved cognitive status (Balestrino et al., 2012).

6.5. Social cognition

The ability to recognise emotions and mental states (that is, beliefs, intents, desires and when someone is pretending) in others, as well as the ability to appreciate that the perspectives of others may differ from our own, are encompassed within the broader cognitive domain of social cognition within the DSM-V (American Psychiatric Association, 2013). The study of this area of cognition is relatively new, and a majority of research to date has taken place within the context of the fronto-temporal lobe dementias, wherein alterations to personality, behaviour and theory of mind are early and defining features (Dermody et al., 2016). That dementia can taint the selection of beneficiaries is recognised in the literature (Liptzin et al., 2010; Peisah et al., 2009). This includes the possibility for personality changes to occur which tend towards 'apathy and passivity' which may potentially expose the testator to undue influence and elder abuse (Liptzin et al., 2010). Beyond recognition of these general facts there is, as yet, no discussion within the literature of the evaluation and/or impact of social cognition within the context of testamentary capacity, again highlighting the need for further work to assess this area of cognitive impairment against specific legal capacities.

7. Testamentary capacity and cognitive abilities in dementia

The first limb of *Banks* requires that a testator understand the nature and effect of making a will. The literature offers little evidence of the threat from dementia to this aspect of the legal test, with the exception of the profound impairments of comprehension and communication present in later stages of dementia. The need to distinguish between the effects of impaired comprehension and/or communication in assessing testamentary capacity at any stage of dementia is however emphasised. Further, whilst delirium and dementia are distinct clinical entities, they are highly interrelated (Hasegawa et al., 2013). The negative impact of delirium on the core functions of arousal and attention ensure its effects are potentially wide enough to adversely impact even this, the first and most basic component of the criteria for testamentary capacity.

The second and third limbs of *Banks* require that a testator understand the nature and extent of his/her property and comprehend the claims to which he/she ought to give effect. Where an estate, or beneficiaries thereof, remain unchanged, a testator may rely on memories of a long term and/or recent nature in considering his/her dispositions. If the beneficiaries, value or composition of the estate have previously and/or continue to alter, a testator requires sufficient recent memory and new learning ability to both acquire and retain up to date details of his/her estate and beneficiaries. In this way, memory is important in equipping the testator with the relevant facts upon which to base his/her choice of beneficiary and disposition. Within such a context, the potential to facilitate learning and retention of a testator's estate details for long enough to allow a reasoned decision regarding its distribution is noted, with the proviso that the encoding and comprehension abilities of the testator are sufficient to allow him/her to take in and understand the information that is provided to her/him.

Uncertainty as to a testator's capacity to *appreciate* potential claims, the third limb in *Banks*, is, along with the fourth limb, arguably one of the most commonly disputed. The frequency with which the third limb forms the focus of testamentary capacity challenges is reflected in its reliance on a wide range of cognitive functions. These include the roles of complex decision-making, reasoning, as well as short and long-term memory in facilitating both the formulation and communication of a rationale to demonstrate appreciation of the claims of potential beneficiaries. Recent and long-term memory are implicated in the preservation of a testator's knowledge of his/her previous beliefs and wishes regarding the distribution of his/her estate, which arguably can be required to formulate a rationale for amendments to a will (Purser & Rosenfeld, 2014). Impairments in recent memory and executive function are associated with losses of insight, perception, judgment, and impulse-control, all of which have the potential to cloud a testator's appreciation of his/her wider circumstances and the impact the distribution of his/her assets can have on potential beneficiaries. Additional cognitive processes of working memory (the ability to hold information in mind whilst manipulating it), future thinking (the ability to think ahead and consider events that have not yet happened), and social cognition are also likely to be of significance to the complex decision-making required within a testamentary context, but have received no attention, as yet, within the literature.

The fourth limb of *Banks* requires that a testator does not suffer from a disorder of the mind or insane delusion that would result in an unwanted testamentary disposition. Dementia is a neurocognitive disorder and, in this sense, *is* a disorder of the mind (American Psychiatric Association, 2013). The focus here is on the cognitive, not the psychiatric symptoms of the illness. However, the question raised within the fourth limb which requires consideration when assessing testamentary capacity in the context of dementia is: whether or not the aggregate cognitive effects of dementia that is, progressive loss of thinking ability, associated functional decline, and the inevitable loss of testamentary capacity, have led the testator, in his/her unique situation, to dispose of his/her assets in a manner that would not have come about were it *not for* his/her disorder of the mind?

8. Conclusion

Although the focus in *Banks* was on the psychiatric symptoms of delusions, it appears that in the modern context the question centres more on cognition and voluntariness, that is, capacity and undue influence. Part of the difficulty in an already complex area is the intersection between the legal and health professionals involved in the assessment of testamentary capacity. Two clear questions do emerge when conducting testamentary capacity assessments. Firstly, what cognitive functions, and levels thereof, are required to satisfy the legal test in the individual circumstances, at the relevant time? Secondly, how are these to be reliably determined?

Different types of, and stages within, dementing conditions give rise to different forms of cognitive impairment. A testator's general level of cognitive function and/or diagnosis does not determine his/her testamentary capacity. Cognitive screening measures, such as the MMSE, do not provide a reliable indication of a testator's cognition in different domains, are prone to under-estimate the extent of executive dysfunction in mild-moderate dementia, and exaggerate levels of cognitive impairment in language based dementias. Existing models of evaluating testamentary capacity offer no practical guidance as to how to assess a testator's cognitive function, especially not within the requisite legal framework.

Discussion in the literature about which components of cognitive function are important when determining testamentary capacity, and how these cognitive functions impact on the relevant legal criteria, is

surprisingly limited. Although there is general consensus regarding the important roles of executive and memory function in testamentary capacity, there is limited discussion regarding the manner in which impairments in these cognitive domains directly impact upon the four limbs of *Banks*. Further, there is no discussion as to how the integrity of these cognitive domains should be satisfactorily evaluated within the relevant legal framework. This is the case even for Alzheimer's disease, the most common form of dementia.

As demonstrated here, there are a number of additional domains of cognitive function which have considerable potential to affect testamentary capacity which remain unexplored. Further work in this area is required to rectify the current subjective and unreliable assessment approaches. Education for legal and health professionals is needed about the limitations of cognitive screening measures such as the MMSE, but also about the dangers of attempting to assess testamentary capacity without an adequate understanding of not only the interplay between the legal and health professions but also the effects of dementia, as well as the many other mentally disabling conditions, on the cognitive abilities necessary to make a will.

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