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Querying the Call to Introduce Mental Capacity Testing to Mental Health Law: Does the Doctrine of Necessity Provide an Alternative?

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Abstract: Trends in international human rights law have challenged States globally to rethink involuntary mental health interventions from a non-discrimination perspective. The United Nations Convention on the Rights of Persons with Disabilities (CRPD) in particular prohibits laws that discriminate on the basis of disability. However, a key criterion for compulsory mental health treatment under typical mental health legislation is a psychiatric diagnosis (in conjunction with risk of harm and other criteria). Hence, for people with mental health disabilities, rights to liberty and consent in healthcare are held to a different standard compared to other citizens. A prominent law reform option being explored by some governments and commentators for achieving non-discrimination is to replace the diagnostic criterion for triggering involuntary intervention with an assessment of mental capacity. After all, every citizen is subject to restrictions on autonomy where they are deemed to lack mental capacity, such as where concussion necessitates emergency service. However, the use of mental capacity “testing” is seen by diverse commentators as wanting in key respects. A prominent criticism comes from the United Nations Committee on the Rights of Persons with Disabilities, which considers mental capacity assessments a form of disability-based discrimination. This article queries the call to replace the diagnostic criterion in mental health law with an assessment of mental capacity in the light of jurisprudence on equality and non-discrimination in international human rights law. Instead, we examine the doctrine of necessity as an area of law, which might help identify specific thresholds for overriding autonomy in emergency circumstances that can be codified in a non-discriminatory

way. We also consider the need for deliberative law reform processes to identify such measures, and we suggest interim, short-term measures for creating a “supported decision-making regime” in the mental health context. The article focuses in particular on the Australian context of mental health law reform, though the analysis can be generalised to international trends in mental health law.

Keywords: mental health law; legal capacity; mental capacity; the United Nations Convention on the Rights of Persons with Disabilities; equality and non-discrimination; international human rights law; involuntary treatment; doctrine of necessity

1. Introduction

Involuntary psychiatric intervention under mental health legislation faces an uncertain future. The United Nations Convention on the Rights of Persons with Disabilities (CRPD) in particular has bolstered calls to repeal or fundamentally alter mental health law¹. The push to rethink mental health law seeks to address its discriminatory nature, which establishes that for people with psychiatric diagnosis healthcare decisions and matters of liberty are held to a different set of rules and standards compared to others (see [1–4]). After all, a key criterion for compulsory intervention under typical mental health law is a psychiatric diagnosis, even as it is applied in conjunction with risk of harm and other criteria. Under international human rights law the CRPD explicitly prohibits laws that discriminate on the basis of disability and recent statements by UN bodies, such as the United Nations Committee on the Rights of Persons with Disabilities (CRPD Committee) [5,6] and the United Nations Office of the High Commissioner of Human Rights (OHCHR) ([7], see also [8], para. 81), advance the view that discriminatory mental health laws should be replaced.

One prominent proposal to remedy the discriminatory aspect of mental health law is to replace the criterion of psychiatric diagnosis with a determination of mental (in)capacity as grounds for detention and involuntary treatment (see [9])². Introducing a mental capacity component to the trigger for coercive intervention would build upon progressive mental health law commentary over recent decades and would harmonise mental healthcare with ethical and legal standards in general healthcare (see [12], p. 541; [13]). The move would seemingly standardise the justification for nonconsensual intervention in emergencies—such as where a person is concussed or falls under isolation and quarantine statutes to prevent the spread of communicable disease—and would seem to be a logical step to equalise standards for lawfully overriding autonomy across health law.

¹ The term “mental health law” can encompass a broad range of law including criminal law (the insanity defence/fitness to plead), contract law (invalidation due to incapacity), tort law (psychiatric injury), and civil commitment law (involuntary treatment and detention). “Mental health law” is used in this article to refer to civil commitment laws: statutes that make lawful the detention and involuntary treatment of people diagnosed with mental illness in certain circumstances.

² The proposal to replace the diagnostic criteria of mental health law with mental capacity is distinct from but closely related to prominent calls to “fuse” mental health law and guardianship law into on single substituted decision-making law. We shall discuss this distinction shortly. See [10,11]

However, the CRPD has simultaneously shifted the legal landscape in another direction. In this direction, the use of mental capacity assessments is viewed not as a force for the achievement of equality and non-discrimination but rather as a potentially insidious form of disability-based discrimination (see [14–16]). A prominent exponent of this view is the CRPD Committee, which has indicated that the use of mental capacity assessments to justify involuntary treatment, would violate Article 12 (and 14) of the CRPD in its articulation of the right to equal recognition before the law ([6], para. 15). A number of practical concerns also arise. Some evidence, for example, has been offered to suggest that mental capacity assessments provide a troubling degree of interpretive flexibility to assessors (see [17,18]), which may expand the scope of coercive intervention and undermine the corrective potential for introducing mental capacity assessments in the first place.

This article will examine the call to replace psychiatric diagnosis with mental (in)capacity as a basis for involuntary intervention under mental health law. Similar analyses have examined this call from the perspective of psychiatric ethics [19], while other prominent studies have focused on “fusing” mental health law and guardianship (adult capacity) law to create an overarching substituted decision-making framework for law and policy [13]. Instead, this article will assess and critique the proposal to introduce mental capacity assessments as grounds for involuntary intervention *within* mental health law. It will use the analytical lens of international human rights law, with specific consideration of the underlying aim of such reform proposals to achieve equality and non-discrimination. Examples from Australian mental health laws will be used to support the discussion. Australian state and territory jurisdictions are especially relevant given that recent law reform activity has tended to include the introduction of mental capacity assessments in various ways into mental health laws (though not as a *replacement* for traditional criteria for involuntary intervention, as we shall discuss)³.

The first section of this article will contextualise our argument by outlining two debates in the disability rights field that underpin calls for the reform of mental health law, namely: (1) the status of involuntary psychiatric intervention under international human rights law and (2) the meaning and application of the right to legal capacity. We will then outline as clearly as possible the arguments for introducing mental capacity testing into mental health law before listing our own critique of this move. We will argue that introducing mental capacity as grounds for interference would fail to stem disability-based discrimination; instead, it would cement it. Further, such a move would constitute a major reform effort with an associated cost that could be better directed toward deliberative reform processes to develop effective alternatives. These reform efforts could be directed toward the development of non-discriminatory grounds for intervention in emergency situations that may (but may not) result from mental health crises. In particular, we will look to the doctrine of necessity in both common and statute law as an avenue for developing alternative criteria/means of responding to emergency crises in which some coercion and corresponding safeguards—on an equal basis with others—may be required. From there the article will discuss two steps toward developing such a codification: (1) creating procedures for active participation of persons with disabilities in law reform processes and (2) as a short and mid-term measure, rather than focusing on adding mental capacity assessments to mental health legislation, introduce measures of supported decision-making.

³ See for example, *Mental Health Act 2014* (Vic) No 26; *Mental Health Act 2014* (WA); *Mental Health Act 2013* (Tas).

2. Mental Health Law

All Australian states and territories have mental health legislation. Each one draws largely on the same criteria for intervention. Section 5 of the *Mental Health Act 2014* (Vic) is typical, where an application for involuntary treatment and detention may be made on the grounds that:

- (a) the person has mental illness; and
- (b) because the person has mental illness, the person needs immediate treatment to prevent—
 - (i) serious deterioration in the person’s mental or physical health; or
 - (ii) serious harm to the person or to another person...

The power to intervene is reframed to occur, as exemplified by the terms of the *Mental Health Act 2014* (Vic), where “there is no less restrictive means reasonably available to enable the person to receive the immediate treatment”⁴.

Under most contemporary mental health laws psychiatrists are the principal persons granted authority to treat involuntarily and detain. Such laws are couched in the language of care and treatment and draw on a paternalistic framework in which the “best interests” standard is applied to guide interventions. The decisions psychiatrists make are wide-ranging but generally regard medical treatment, which typically includes psychopharmaceutical medication, as well as electroconvulsive therapy (ECT) and psychosurgery⁵. The administration of drug therapy is by far the most common method of medical treatment following involuntary intervention under mental health law.

Decisions regarding treatment and detention may also include making restrictions on correspondence, movement, financial decision-making, the power to drive vehicles, and so on—hence why the Victorian Law Reform Commission used the term “clinical guardianship” to describe the role of the authorised psychiatrist ([23], part 9). Typically, mental health legislation also authorises social workers and other professionals (such as registered psychologists, nurses, and occupational therapists) to compel assessment of a person in a registered mental health setting if they believe the criteria for involuntary treatment may apply⁶. Mental health tribunals and other bodies are typically given formal powers under mental health law, and are designed to provide an external review process as a procedural protection. Tribunals and similar bodies have a range of powers to review clinical decisions (see [24])

⁴ *Mental Health Act 2014* (Vic) No 26 s 5(d).

⁵ ECT and psychosurgery treatments are administered relatively infrequently and typically require authorisation from a mental health tribunal given their invasive nature. Although there is little empirical research documenting numbers of recipients of ECT in Australia, or the number of times ECT is administered in various jurisdictions [20] there is some evidence indicates that the numbers are relatively low [21]. The same conclusion may be drawn about psychosurgery. In Victoria, for example, the Victorian Psychosurgery Review Board—which grants permission to any psychosurgery measures—dealt with no operations between 2001 and 2006, and 12 applications between 2007 and 2012 (all of them for “Deep Brain Stimulation”) ([22], p. 30).

⁶ *Mental Health Act 2014* (Vic) No 26 ss. 3, 28(1) and 29.

and indeed can be seen to have substituted decision-making powers in some cases⁷. In some jurisdictions, for example, mental health tribunals are authorised to make treatment orders⁸. For example, Section 168 of the Tasmanian *Mental Health Act 2013* (Tas) authorises the mental health tribunal to “make, vary, renew and discharge treatment orders”⁹.

Bernadette McSherry and Penelope Weller have characterised contemporary mental health law in Australia and elsewhere in Western developed common law jurisdictions as “rights-based legalism”, given the precedence granted to the language of rights [3]. Such an approach was adopted to formulate both defensive claims (rights *not* be interfered with, as expressed in terms such as, “least possible restrictive environment”) and to advance positive demands (rights to the provision of quality care, through terms such as the “effective giving of...care and treatment”) ([3], pp. 4–5). The introduction of these kinds of mental health statutes, typified by the *Mental Health Act 1986* (Vic), sought to bring greater accountability to professional discretion through the legalisation of decision-making processes, combined with quasi-judicial review and procedural protections. However, laws remained couched in the language of care and treatment and did not adopt the more comprehensive procedural protections as other areas of law, such as criminal proceedings.

The purposes of mental health law are well summarised by Hale, who observed that civil commitment legislation has perpetually struggled to “reconcile three overlapping but often competing goals: protecting the public, obtaining access to the services people need, and safeguarding users’ civil rights” ([25], p. 19). To illustrate these competing aims, consider Elizabeth Farr’s account of her own experience of psychosis. After years of aural and visual hallucinations, Farr experienced an increasing need to undertake a dangerous act:

I thought the voices came from other worlds. I believed I was approaching an Enlightened State. The voices told me that in order to reach this Enlightened state I would have, at the appropriate moment, to jump from the seventh floor of a building and land on my head in a certain way. This would put me in a cosmic junction whereupon...I would be able to enlighten all mankind ([26], p. 4).

There is a dilemma that arises where a person appears to be putting himself/herself (or others) at grave risk without apparent knowledge of that risk, which gives rise to no easy answers (it is not hard to imagine how similarly bizarre thoughts could centre on violence toward others). However, how should the law work when someone is unaware of the harm of his or her actions because of psychosis or other extreme states of consciousness? If person A blocks person B from self-harming or putting themselves at risk in these situations, should person A be charged with assault? If not, how should that scenario be seen in law? Again, these questions give rise to no easy answers.

⁷ There is some controversy as to whether mental health courts or tribunals in fact have such decision-making power as they are ostensibly designed to be a regulatory safeguard. Nevertheless, in the case of *MH2 v Mental Health Review Board*, for example, the Victorian Mental Health Review Board was described as having “all the functions of the decision maker...that are relevant to the decision under review”. *MH2 v Mental Health Review Board* (Human Rights) [2013] VCAT 734 (8 May 2013) para. 2(d).

⁸ *Mental Health Act 2014* (Vic) No 26 s153(a)(1) and *Mental Health Act 2013* (Tas) No. 2 s168(1)(a).

⁹ *Mental Health Act 2013* (Tas) No. 2 s168(1)(a).

Under current law, mental health law addresses these (and other) questions. Mental health law uses the diagnostic criterion, along with a test of the risk of harm to self or others, to trigger a response to extreme mental health crises with urgency, and to regulate those responses. Even some commentators who criticise the discriminatory nature of mental health legislation, such as Szmukler, Daw and Dawson, acknowledge the benefit of its regulatory power [27]. Others, such as Minkowitz, reject this view as circular logic based on the false premise that involuntary treatment powers are required in the first place [28].

Nevertheless, the basic justification for mental health law is that regulation of emergency treatment powers, detention in hospital and forced treatment, ensure that such powers are authorised and monitored with procedural protections. In other words, if emergency powers are needed in *some* circumstances for *some* mental health crises—which, it can be reasonably assumed, the majority of people would agree should be the case—then these powers need to be clearly authorised and regulated. Such a function is currently provided by mental health legislation (see [29], p. 337). From this view, mental health law provides the necessary procedural protection and safeguards against paternalistic overreach, negligence or inconsistent application of law.

However, despite the hard-won gains and achievements of reformers seeking to improve upon earlier laws, mental health law has been the subject of wide ranging critique, with some commentators charging that mental health law creates more problems than it solves (see for example, [1,6,13,30]). Mental health law has been variously described as anti-therapeutic, ineffective on its own terms, and discriminatory (see [28,30,31]). A major criticism is that mental health law has typically struggled to provide substantive rights to persons with mental impairments in the form of access to healthcare and support. Peay describes the lop-sided emphasis on negative rights as the “problematic nexus of mental health and law” where the law has taken a historical role of restraining rather than facilitating access to services ([32], p. xvii). The CRPD has been interpreted to bolster “positive rights” obligations [33], and has raised other, new questions about mental health law in the light of international human rights law. The charge that mental health law is discriminatory is the principal challenge of the CRPD (see [1]), to which the following section will now turn.

2.1. The Challenge of the CRPD to Mental Health Law

Michael Perlin and Eva Szeli observe that the CRPD brought mental health issues forcefully into the fold of disability issues and international human rights law [34]. The notion of disability in the CRPD was intended to include disability related to mental illness, which is captured in the reference to disability as “includ(ing) those who have long-term physical, *mental*, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others” (Article 1 [emphasis added]). Preamble (e) elaborates on this definition of disability as “an evolving concept...(that) results from the *interaction* between persons with impairments and attitudinal and environmental barriers that hinders their full and effective participation in society on an equal basis with others” (emphasis added). This definition would appear to shift the emphasis from identifying deficits in persons with disabilities, in terms of pathology, to identifying external barriers to their participation on an equal basis with others.

Rather than using the term “mental disability” we shall refer to “psychosocial disability” to describe disability related to mental illness, mental disorder, extreme distress and so on. Although this term does not appear in the CRPD, the term is adopted by authoritative bodies such as the UN CRPD Committee [6] and, in Australia, the National Mental Health Commission [35] and the national umbrella representative body for people with disabilities, People with Disabilities Australia [36].

The involvement of disabled people’s organisations, including people with psychosocial disabilities, in the development of the CRPD had a significant effect on the enumeration of international human rights law in relation to mental health law and policy [37]. Wildeman describes the “radical challenges to global mental health policy that have gained new legitimacy and momentum through the participation of [disability people’s organisations] in the CRPD process” ([37], p. 49).

These challenges centre on a number of provisions of the CRPD that will create ongoing challenges to the operation of mental health law. These articles have been elaborated upon elsewhere (see for example [1,28,37], and require only brief summation here. Article 5(2), for example, prohibits disability-based discrimination, and paragraph 1 directs States Parties to “recognize that all persons are equal before and under the law and are entitled without any discrimination to the equal protection and equal benefit of the law”. Laws that discriminate on the basis of disability also appear to contradict the fundamental principles in Article 3 of the CRPD, particularly with regards to paragraphs (a) (“[r]espect for inherent dignity, individual autonomy including the freedom to make one’s own choices, and independence of persons”); (b) (“non-discrimination”)...and (e) (“equality of opportunity”).

Article 14(1) refers to the right to liberty and states that, “the existence of a disability shall in no case justify a deprivation of liberty”. The words, “the existence of a disability shall in no case justify a deprivation of liberty” have been interpreted in two ways. According to the first reading, the existence of a disability *alone* cannot justify such laws, which was the view adopted by the Australian government [38]. According to the second reading the use of disability as a criterion for the deprivation of liberty, even when used in conjunction with other criteria to justify detention (such as risk of harm to self or others), would violate Article 14. The CRPD Committee has decisively endorsed the latter view, stating that:

legislation of several states party, including mental health laws, still provide instances in which persons may be detained on the grounds of their actual or perceived disability, provided there are other reasons for their detention, including that they are dangerous to themselves or to others. *This practice is incompatible with article 14 as interpreted by the jurisprudence of the CRPD committee* ([39], para. 1 (emphasis added)).

This reading may come as a surprise to governments who have signed and ratified the CRPD, especially those which explicitly stated reservations, understanding and declarations as to how they interpreted the CRPD at the time of signing.

Other articles of the CRPD appear to be violated by mental health law. Article 17 states that “(e)very person with disabilities has a right to respect for his or her physical and mental integrity on an equal basis with others”, which is activated with regards to involuntary treatment. With regard to the right to health, Article 25(d) directs that States Parties shall “(r)equire health professionals to provide care of the same quality to persons with disabilities as to others, including on the basis of free and informed

consent”. Finally, Article 12 directs that States Parties shall not place restrictions on legal capacity on the basis of a disability, which mental health legislation clearly does.

2.2. UN Treaty Body Challenges to Mental Health Law

United Nations treaty bodies elaborated with interpretive guidance on how mental health legislation can be understood in relation to the CRPD. The OHCHR, for example, has expressed the view that mental health legislation is unjustly discriminatory against people with psychosocial disability because it systematically uses mental illness as a criterion to limit legal capacity [40]. In 2009, the OHCHR made the following statement:

Legislation authorizing the institutionalization of persons with disabilities on the grounds of their disability without their free and informed consent must be abolished. This must include the repeal of provisions authorizing institutionalization of persons with disabilities for their care and treatment without their free and informed consent, as well as provisions authorizing the preventive detention of persons with disabilities on grounds such as the likelihood of them posing a danger to themselves or others, in all cases in which such grounds of care, treatment and public security are linked in legislation to an apparent or diagnosed mental illness ([40], para. 49; see also [7]).

The CRPD Committee echoed the view of the OHCHR, though not in such decisive terms. In its concluding observations on the compliance of China with the CRPD, the CRPD Committee recommended “the abolishment of the practice of involuntary civil commitment based on actual or perceived impairment” [41]. The most recent concluding observations to Australia—in the strongest terms of a concluding observation yet—directed that Australia repeal “legal provisions that authorize commitment of individuals to detention in mental health services, or the imposition of compulsory treatment either in institutions or in the community via Community Treatment Orders (CTOs)” [5].

The CRPD Committee elaborated further on the matter of repealing mental health law in its “General Comment on Article 12 of the Convention-Equal Recognition before the Law” [6]. Paragraph 42 of the Comment refers to Article 12 in conjunction with Articles 15, 16 and 17 of the CRPD, regarding respect for personal integrity and freedom from torture, violence, exploitation and abuse:

As has been stated by the Committee in several concluding observations, forced treatment by psychiatric and other health and medical professionals is a violation of the right to equal recognition before the law and an infringement of the rights to personal integrity (art. 17); freedom from torture (art. 15); and freedom from violence, exploitation and abuse (art. 16). This practice denies the legal capacity of a person to choose medical treatment and, is therefore, a violation of article 12 of the Convention. States parties must, instead, respect the legal capacity of persons with disabilities to make decisions at all times, including in crisis situations; must ensure that accurate and accessible information is provided about service options and that non-medical approaches are made available; and must provide access to independent support. States parties have an obligation to provide access to support for decisions regarding psychiatric and other medical treatment. Forced treatment is a particular problem for persons with psychosocial, intellectual and other cognitive

disabilities. States parties must abolish policies and legislative provisions that allow or perpetrate forced treatment, as it is an ongoing violation found in mental health laws across the globe, despite empirical evidence indicating its lack of effectiveness and the views of people using mental health systems who have experienced deep pain and trauma as a result of forced treatment. The Committee recommends that States parties ensure that decisions relating to a person's physical or mental integrity can only be taken with the free and informed consent of the person concerned ([6], para. 42).

The CRPD Committee directs States Parties to replace mental health law with a “supported decision-making regime” ([6], paras. 26 and 29). Such a regime would involve providing new measures under the imperative to provide support to exercise legal capacity to persons with psychosocial disability, and seemingly to replace any functions of mental health law that are necessary to uphold other rights.

The views of UN treaty bodies on mental health law, and the implications of each of the various Articles noted previously have been discussed in detailed studies and do not warrant elaboration here (see particularly [1]). This brief summary is instead meant to elucidate the call under international human rights law to rethink mental health laws, and (potentially) to use mental capacity as a replacement for the diagnostic criteria.

3. Traditional Justifications for Mental Health Law

As noted previously, both proponents and opponents of mental health legislation agree that such law establishes a different standard of rights to liberty and consent to healthcare for people with a mental health diagnosis compared to other citizens. There remains some debate, however, as to whether mental health law constitutes discrimination in the sense of unjust prejudicial treatment of one group, or whether it constitutes a “special measure”. Special measures refer to an acceptable departure from the principle that people are entitled to equal protection of the law and should not be subject to discrimination on the ground of a certain attribute. For example, the Victorian *Equal Opportunity Act 2010* section 12(1) defines a special measure as having the “purpose of promoting or realising substantive equality for members of a group with a particular attribute”¹⁰.

3.1. Psychiatric Diagnosis as a Justification for Intervention

The justification of using psychiatric diagnosis as grounds for involuntary intervention is varied. Craigie and Bertolotti note that this view is justified for a range of reasons, including:

impaired insight in mental disorder; to mental disorder removing autonomous control; to the association of mental illness with global irrationality; and to the idea that mental disorder undermines personal identity or diachronic agency. Whatever the underlying assumptions, law that bases interference on the presence of mental disorder—the so-called “status” approach—holds that a psychiatric diagnosis eliminates the need to assess the person's decision-making ability. The diagnosis alone is taken to mean that the person is not in a position to decide for themselves, at least in relation to psychiatric treatment...[19].

¹⁰ *Equal Opportunity Act 2010* (Vic) s 12(1).

Such justifications underpin the reference to people with psychosocial disabilities in almost all international human rights law to date, including regional human rights laws such as the European Convention on Human Rights. For example, the European Convention on Human Rights (ECHR) has retained a number of caveats providing for specific groups to be detained under domestic legislation, including detention “of persons for the prevention of the spreading of infectious diseases of persons of unsound mind, alcoholics, drug addicts or vagrants”¹¹. In other words, international law contains a number of justifications for departing from human rights norms with regards the person of “unsound mind”, a view to which the CRPD poses a fundamental challenge ([42], p. 497). Regardless, even if international human rights law is set aside, the “status-based” view that diagnosis alone means the person cannot decide for themselves, at least in relation to psychiatric treatment, has been widely criticized, especially as a justification for legal structures that suspend liberal values of equality and the freedom to choose how to live one’s life (see for example, [1,10]).

Similar criticisms have been aimed at risk-based justifications for using diagnostic criteria, where notions of risk associated with mental health diagnoses appear to have been overstated and lack a scientific basis (see for example, [1,43,44]). Callaghan and Ryan have argued that “no study has ever shown that risk assessment is able to prevent suicide or serious violence, and none is ever likely to” ([9], p. 752). Preventative detention based on perceived risk can also be seen to be applied unequally to people with a diagnosis of mental illness [1]. An example of this unequal application is where other groups who are credibly more likely to be violent to others (such as young men consuming alcohol or known perpetrators of domestic violence) do not face similar curtailments of liberty and autonomy.

3.2. *Mental Capacity as a Justification for Intervention*

The replacement of diagnosis with mental (in)capacity as grounds for interference is meant to provide equally for all circumstances in which an individual’s autonomy might be overridden on health grounds. This approach would seemingly address both of the issues noted in the previous section. Again, it would seemingly apply the same legal framework to *all* persons perceived to lack mental capacity, whether due to temporary injury, intellectual disability, mental health condition or other cognitive disability, and whether the decision in question relates to an individual’s medical treatment, personal or welfare decisions, financial decision-making, and so on. It would appear to address the second concern—on the discriminatory application of risk-based assessments to people with psychosocial disability—by tolerating decisions with possibly grave consequences. There is some variation in jurisdictions as to whether the severity of possible consequences of a decision influence the application of the mental capacity assessment; that is, applying the test more stringently if the outcome is

¹¹ European Convention for the Protection of Human Rights and Fundamental Freedoms, as amended by Protocols Nos. 11 and 14, 4 November 1950, ETS 5, Article 5 s1(e); ECHR Article 5(1)(e). For ECHR case law that elucidates the application of Article 5(1)(e), see *Winterwerp v The Netherlands* (1979) ECHR 4 (app. no. 6301/73). *Winterwerp v Netherlands* (1979) 2 EHRR 387. The judge indicated that detention of a person of unsound mind can only be lawful under article 5(1)e if the following minimum criteria is satisfied in accordance with a procedure prescribed by law: “Except in emergency cases, no one can be deprived of liberty unless he or she can be reliably shown to be of unsound mind on the basis of objective medical expertise. The mental disorder must be of a kind or degree warranting compulsory confinement. The validity of continued confinement depends on the persistence of the disorder”.

potentially severe (see [45]). However, there is some evidence to show that courts in the UK and Australia are permitting greater scope for risk than was previously the case (see [19,33]).

In addressing these two major concerns about mental health law, mental capacity assessments are advanced as a more ethical basis for involuntary psychiatric intervention (see [9–11,19]). Arguably, assessors would no longer rely on diagnosis and could largely transcend the subjective judgment of the outcome of a person's choice; instead judging whether a person comprehends a decision that needs to be made at a particular time. Accordingly, mental capacity assessments would preserve the right to live according to one's own wishes, no matter how eccentric they are, and would provide greater impartiality for a range of professionals (not simply psychiatrists) who can apply a longstanding test for securing informed consent in general health. Where consent cannot be secured in the case that emergency intervention is required, a series of safeguards are triggered for securing the rights of the individual.

These hypotheses are of course contested, and in the next Section we will outline a number of key concerns raised by commentators who have criticised mental capacity assessments, both where they are applied in general, and in the mental health context in particular.

4. General Criticisms of Mental Capacity

Despite the seemingly progressive place of functional mental capacity models in the history of law, they raise a number of dilemmas, three of which we will outline below.

First, the functional approach continues to strip some of the rights of the person deemed incapable, where decision-making power over certain aspects of a person's life and property are curtailed. Kristin Glen Booth argues that what remains unquestioned in mental capacity law "is that once a person is deemed incapacitated, however defined or established, said person is deprived of the right and power to make—and act on—her own decisions, instead conferring that power on another" ([46], p. 118).

Second, it is extremely difficult to design capacity tests with the sensitivity to evaluate the autonomy of the individual. Genevra Richardson has written that "(i)f the test of mental capacity is set too high, it will exclude our truly autonomous choices...but if it is set too low it may accord respect to choices that do not reflect our true wishes" ([47], p. 90). In United Kingdom case law, Richardson argues, the definition of capacity appears to be interpreted fairly flexibly by the courts in order to achieve the desired outcome ([47], p. 90). This flexibility can be seen as necessary to avoid too rigid an application of the binary between capacity and incapacity; yet the potential for inconsistency remains, and this flexibility does not provide strong grounds for a person to claim rights ([47], p. 91).

The two arguments set out above do not concern direct discrimination against persons with disabilities. After all, the intrusions on autonomy described apply equally to the whole population. However, it seems impossible to extract the status approach from a functional capacity approach. While functional capacity "testing" may be *formally* equal such testing will disproportionately affect people with cognitive disabilities in effect [6]. People with cognitive disabilities will not only fail capacity tests more often, they are more likely to be subject to testing where others are not, particularly given the heightened role of experts and government officials in their lives (see [48]). This is problematic from a CRPD perspective, as Article 2 of the CRPD (which defines "discrimination on the basis of disability") in conjunction with Article 5 (which sets out equality and non-discrimination provisions)

indicates that laws cannot discriminate against people with disability in their purpose *or effect*¹². Amita Dhanda has argued that even the most progressive adult guardianship laws maintain a false dichotomy between capable and incapable, which leads to false presumptions that people with disabilities do not have mental capacity [49]. In other words, the very undertaking of assessments of mental capacity appear discriminatory under the terms of the CRPD, a view that was adopted by the CRPD Committee in its General Comment no. 1 [6]. The CRPD Committee stated that, the “functional approach” is flawed because it is “discriminatorily applied to people with disabilities” and falsely presumes to be able to “accurately assess the inner-workings of the human mind and to then deny a core human right—the right to equal recognition before the law—when an individual does not pass the assessment” ([6], para. 15). The CRPD Committee has made clear the distinction between *mental* capacity and *legal* capacity in General Comment 1, urging States to reflect this distinction in their legislative frameworks and end assessments of capacity even as a basis for the provision of support ([6], para. 29(i)).

Criticisms of Mental Capacity in the Mental Health Context

In the mental health context, a number of concerns have been raised regarding the introduction of mental capacity as grounds for coercive intervention. Bartlett has noted that the requirement in the assessment of functional capacity to understand and appreciate the nature and consequences of the decision is too flexible and “has led to allegations that capacity means agreeing with the psychiatrist” ([12], p. 28). Further, he suggests that:

it is difficult to see that the incapacity can sensibly be separated from the mental disability, given that it is the mental disability that is the direct cause of the incapacity. Insofar as the use of the disability as a criterion is discriminatory, therefore, the use of incapacity as a detention criterion merely moves direct discrimination into indirect discrimination, and this is not really a significant advance ([12], p. 29).

This argument has a parallel in general criticisms of mental health law as not providing sufficient counter-balance to psychiatrists substituted decision-making power. For example, Weller has queried whether rights-based legalism better protects substantive rights given that discretionary power remains with medical authorities who retain privileged status as expert witness [50]. Similarly, the 1993 Australian Human Rights and Equal Opportunity Commission Report, *Human Rights and Mental Illness: Report of the National Inquiry into the Human Rights of People with Mental Illness*, found that legislative formulations in Australian states are “marked by circularity of reasoning and apparently designed to intrude to a minimal degree upon the territory of psychiatrists” ([51], p. 40). More generally, Fennell proposes that the rights-based rhetoric of mental health law contradicts the lack of substantive rights protection the law offers in practice, and instead codifies medical authority to treat and detain [52]. It is difficult to see how the move to including mental capacity will not perpetuate this codification (though whether this is a positive or negative thing is perhaps the subject of a different paper). It should also be acknowledged here that major proponents of the mental capacity approach also promote removal or significantly reduction in the use of risk-based assessments (see for example, [9,10,13]).

¹² CRPD Articles 2 and 4.

It may be useful to look to mental capacity law reform efforts in Northern Ireland to consider further issues that may arise when mental capacity assessments are introduced to achieve non-discrimination against persons with disability¹³. The *Draft Mental Capacity Bill 2014* is designed to “fuse” mental health law and mental capacity law so as to avoid relying on a diagnosis of mental illness as a criterion for detention and involuntary treatment under current mental health legislation [53]. The *Draft Mental Capacity Bill 2014* would appear to expand somewhat the criteria for mental (in)capacity beyond typical functional assessments. The accompanying policy material states, “(i)t will not be sufficient for a person to have a cognitive understanding of the information relevant to the decision” ([53], s 2.2). Instead, a “person whose insight is distorted by their illness or a person suffering from delusional thinking as a result of their illness, may not...meet this element of the test” ([53], s 2.2). This would seem to widen the interpretative flexibility of mental capacity assessors (though there is some evidence that assessors in the UK are currently using this approach, as we will discuss shortly). This seems a somewhat inevitable step in applying mental capacity assessments to the mental health context, where the unique nature of many of the extreme mental health crises that lead to civil commitment will require a specialised adaptation of the typical “understand and appreciate” test (perhaps the most well-known of such adaptations is the MacArthur Competence Assessment Tool-Treatment [54]). However, the use of “insight” as a criterion in the “understand and appreciate” test may cause significant problems, which do not appear to have been addressed in theory or practice.

First, “insight” is a notoriously slippery term that is difficult, if not impossible, to substantiate in relation to a person because it refers to a “subjective report of his or her internal state” ([55], p. 159). Second, it is difficult for any external review mechanism to evaluate claims about the *absence* of a characteristic, rather than the existence of a characteristic, such as self-harming or violent actions. Diesfeld and Sjostrom investigated how the term “insight” was employed in 25 decisions from mental health review proceedings in Victoria and found the application of the term to be “problematic” [56]. While they did find the term provided “interpretative flexibility” to usefully resolve complex issues, they concluded that there was little clarity as to how the term was used, confused logic in its application, and “frequent allusions to an implicit and undefined scale of insight, offering the appearance of objectivity” ([56], p. 85). Sullivan and Ferrell describe the application of “insight” as a “stigmatizing prelude” to continued detention ([57], p. 5).

There is evidence to suggest “insight” is already being used in mental capacity assessments by public authorities in England and Wales under the *Mental Capacity Act 2005* (England and Wales) (hereinafter “MCA”) as a criterion for determining mental (in)capacity (see for example, [17]). Emmett and colleagues found that “(w)here assessors did not agree with patients’ decisions, they were prone to interpret the decision as lacking insight and, thus, the decision maker as lacking capacity” ([17], p. 78). In Williams and colleagues’ analysis of the application of capacity testing under the MCA, they found that:

there was a dilemma about the difference between someone with capacity who made an ‘unwise decision’ and someone who lacked capacity, as also found by Willner *et al.* The two matters were often confusingly conflated within the notion of ‘lack of insight’ which was a commonly cited reason for assessing a lack of capacity ([18], p. 159).

¹³ See Draft Mental Capacity Bill (Northern Ireland) s3(1)(c).

The research of Emmett and colleagues indicate that the “insight” criterion in assessments of mental capacity—from a pragmatic perspective—would likely undermine efforts to decouple mental capacity from “unwise decisions”.

Assessments of mental capacity may provide similar scope for detaining and treating people. The Northern Irish law reformers appear to have sought to constrain such potential by including as criterion for compulsion the “prevention of serious harm conditions” in relation to treatment (Section 19 (1)), as well making consideration for resistance by the relevant person to provision of certain treatment (Section 20), and some restrictions on the provision of “treatment with serious consequences” (such as side-effects, serious pain and distress) (Section 18). These efforts mark an important step toward addressing the discrimination in current mental health legislation and in removing “powers” for treatment which are based on scientifically unfounded and erroneously held views about risk and particularly the efficacy of risk-assessments. However, the issues we have raised in this section would indicate that there are still some serious concerns from both a human rights and a pragmatic perspective, which remain unaddressed in calls to replace diagnosis with mental (in)capacity as grounds for emergency coercion.

5. Sketching an Alternative Path of Reform

In this article we have so far raised concerns about the introduction of mental capacity assessments as criteria determining involuntary psychiatric intervention. From here, we wish to outline alternative avenues of law reform to build what the CRPD Committee describes as a “supported decision-making regime” [6]. In particular, we will examine the potential for “disability neutral” (or non-discriminatory) grounds for emergency interference with autonomy based on existing laws on the doctrine of necessity. We offer an alternative avenue for rethinking mental health law and do so as *one* possible way to address the concern that prohibition of all forms of emergency intervention in which decisions are made “for” a person “places a greater burden on the concept of ‘support’ than it is able to bear, and in so doing, obscures the true nature of some types of decisions” ([9], p. 748). The challenge of the CRPD to those who agree that some coercion is necessary in some circumstances is the need to “explicitly define the emergency instances in which legal *agency* can be over-ridden and in which coercion can occur in ways that do not discriminate on the basis of disability” ([48], p. 62). We will argue that the doctrine of necessity, as applied in common law and which variously appears in statute law, is an area of law with possible solutions for law reformers wishing to constrain discriminatory intervention while also providing for a principle-based framework for making decisions that may intrude on autonomy in some emergency circumstances. Thereafter, we will outline feasible short-term reform options for establishing a supported decision-making regime and bringing mental health laws into greater compliance with international human rights standards.

5.1. Codifying the Doctrine of Necessity

From the 1980s onwards, in the Australian context and elsewhere, an individual’s mental capacity became recognised in law as the key to determining where intervention by third parties without the person’s consent can be lawful. The courts traditionally addressed this issue using the common law doctrine of necessity to justify interventions made without the person’s consent. This has subsequently

been codified through the use of mental capacity assessments to determine whether substituted decision-makers should be formally appointed, for example through the *Guardianship and Administration Act 1986 (Vic)*.

It is worth briefly considering the jurisprudence on the application of the doctrine of necessity to emergency situations where third parties cannot establish the person's will and preferences and a decision urgently needs to be made. These situations commonly arise where the person has not made an advance directive setting out their wishes in a specific context or appointing a person to carry out those wishes at a time when they may not be able to communicate. While some of the early judicial decisions on the application of this doctrine are concerning from a human rights perspective¹⁴, there is evidence in more recent Australian case law that the doctrine of necessity can be sufficiently narrow in scope to cover some emergency situations where third party intervention is required without undermining the individual's autonomy or providing a *carte blanche* grounds for intrusion by intervenors.

The seminal case on the application of the doctrine of necessity to people deemed to lack mental capacity in England and Wales is *Re F*¹⁵. In this case, the House of Lords authorised the sterilisation of a woman with a learning disability who was deemed unable to consent. The woman's mother sought leave to sterilise her daughter on the basis that she would be unable to cope with pregnancy, delivery and childbirth, and that all other contraceptive options were inappropriate. The House of Lords found that the woman could be sterilised without her consent since she lacked mental capacity to consent and the decision was in her "best interests".

In this judgment, Lord Brandon stated that a best interests intervention is lawful under the doctrine of necessity "if, it is carried out in order either to save their lives, or to ensure improvement or prevent deterioration in their physical or mental health"¹⁶. The court also held that the doctrine includes decisions made in everyday life, as well as serious situations. Lord Goff stated, "It is by virtue of this principle that the doctor who treats him, the nurse who cares for him, even the relative or friend or neighbour who comes in to look after him, will commit no wrong when he or she touches his body". These statements demonstrate how broad the common law doctrine of necessity can be drawn.

In response to this broad application of the doctrine, attempts to narrow its scope have been made. One such example is through the introduction of the "general defence" in the MCA. This effort allows a third party to undertake an act in connection with the care or treatment of another person, if that third party reasonably believes that the person lacks mental capacity, and that the act is in the person's best interests¹⁷. However, this legislative provision is still drawn very broadly and allows for decisions to be made in situations which are not emergency situations where it should have been possible to establish the individual's will and preferences and support her to make the decision in question, rather than removing the individual's legal capacity.

¹⁴ The doctrine of necessity was confirmed in the tort law context in the case of *Re F* (1990), which will be discussed shortly. *Re F* (1990) referred to the sterilization of a young woman with psychosocial disability who was unable to consent. See also *HL V UK* (2004) in which the doctrine of necessity was used to justify the deprivation of liberty of a man who was compliant with treatment and deprivation of liberty but was unable to consent to the intervention as he lacked mental capacity (for a detailed discussion of the latter case see [58]).

¹⁵ [1989] 2 All ER 545.

¹⁶ [1989] 2 All ER 550.

¹⁷ Mental Capacity Act 2005 (England and Wales) s5.

Nevertheless, recent case law in Australia demonstrates a new approach to the doctrine of necessity, which shows promise in moving away from the imposition of interventions without the person's consent on the basis that she lacks mental capacity. In *Stuart v Kirkland-Veenstra*¹⁸, the High Court of Australia held that the police were not liable for failing to detain a man who they deemed not to meet the criteria of mental disorder under the *Mental Health Act 1986 (Vic)*. The police found the man in his car with the exhaust pipe connected via a tube through his window, but there were no fumes in the vehicle. He told them that he was “unhappy” in his marriage, but knew there were options available to him other than suicide, and that he would visit his doctor later that day. The police offered to call his doctor or connect him with other support services but he refused this help. Later that day he committed suicide and was found dead in his vehicle near his home.

The High Court held that neither the common law doctrine of necessity nor the duty of care were sufficiently broad to allow the police to intervene in this situation where the man did not meet the criteria for detention under the *Mental Health Act 1983 (NSW)*. In doing so, the court reversed the decision of the Court of Appeal, which found that the police officers did owe such a duty of care. To support this decision, French CJ relied on the value of personal autonomy, stating as follows:

Personal autonomy is a value that informs much of the common law. It is a value that is reflected in the law of negligence. The co-existence of a knowledge of a risk of harm and power to avert or minimise that harm does not, without more, give rise to a duty of care at common law...there is no general duty to rescue.

This decision provides an important example of how the common law doctrine of necessity can be constrained in its application. However, it is important to note that in this case, the police affirmed that they believed the man to possess mental capacity, and focused on how “rational” and “reasonable” he appeared in their interactions with him. Perhaps quite a different decision might have been reached if the police, or the court had found the man to lack mental capacity.

One concern about the unfettered application of these kinds of common law doctrines is that the courts can take vastly different positions on the point at which intervention is warranted, and this creates legal uncertainty for professionals and families supporting people with psychosocial disabilities. In light of this, it is appropriate to consider the possibility of codifying this doctrine to narrow its scope to the justification of intervention in certain emergency situations. Efforts at codification have already been made, such as the provision in the MCA discussed above, but many will fall foul of CRPD requirements, or provide too much power to the person to decide when to intervene. Some emergency intervention provisions exist in different parts of Australian legislation—for example, the power for paramedics to take a person directly to a mental health facility rather than an emergency department¹⁹, the power of third parties to intervene by taking reasonable steps to prevent the commission of suicide²⁰, and so on. In the current legislative framework, however, these powers are scattered throughout different legal instruments and their application in specific contexts is not well understood.

¹⁸ [2009] HCA 15.

¹⁹ Mental Health Act 2007 (NSW) s81.

²⁰ Crimes Act 1958 (Vic) s436(b). Section 436(b) states, “(e)very person is justified in using such force as may reasonably be necessary to prevent the commission of suicide or of any act which he believes on reasonable grounds would, if permitted, amount to suicide”.

One option for moving forward to codifying the doctrine of necessity is to consider the proposal of Michael Bach and Lara Kerzner in their suggested legislative framework for legal capacity [59]. Bach and Kerzner suggest the use of a criteria of “serious adverse effects” to justify protective intervention:

An adult is in a situation of serious adverse effects as a result of his/her actions or those of others, if the adult:

1. Experiences loss of a significant part of a person’s property, or a person’s failure to provide necessities of life for himself or herself or for dependants; or
2. Experiences serious illness or injury, and deprivation of liberty or personal security; or
3. Has threatened or attempted or is threatening or attempting to cause physical and/or psychological harm to himself or herself; or
4. Has behaved or is behaving violently towards another person or has caused or is causing another person to fear physical and/or psychological harm from him or her ([59], p. 47).

In our view, this represents an overly paternalistic justification for intervention and does not adequately balance the individual’s dignity of risk with the legitimate state impulse to protect its citizens from exploitation and abuse. In particular, where the person is experiencing serious adverse affects by virtue of the actions of others, we do not believe that this should justify a paternalistic intervention on the privacy or freedom of an individual who may have already been exploited or abused—but rather that the perpetrator of such abuse should be pursued. Similarly, the risk of loss of property, while it might be significant, is in our view, not sufficiently dangerous to warrant *pre-emptive* action on the part of the state or others who might wish to intervene in an individual’s decision-making. Therefore, we would propose an alternative, restrictive definition of serious adverse effects as follows:

A situation of serious adverse effects occurs when a person’s life, health or safety is at imminent and grave risk, and failure to intervene would constitute criminal or civil negligence.

We would add that this provision must be equally applied to those with and without disabilities—and that an individual’s perceived or actual mental capacity should not form part of the basis for intervention.

This cursory suggestion is offered in the spirit of advancing debate in the field. A fuller discussion of the upsides and potential pitfalls of such a definition are outside the scope of this paper. Nevertheless, we have here sought to build upon Bach and Kerzner’s definition of “serious adverse effects”, which serves a useful starting point in delineating emergency situations where intervention may be necessary for all, rather than the application of a lower threshold only for those deemed to lack mental capacity.

Justification for State Intervention in Private Life

Many of the examples of situations which require legal clarity on intervention centre on interventions to prevent the commission of suicide, or serious self-harm (or harm to others) where a person is deemed not to understand the nature and consequences of the decision. However, there can be seen to be increasing encroachment of the law into the private lives of individuals on the basis that they lack mental capacity, when similar interventions in the lives of people who are deemed to possess

mental capacity are never the subject of legal scrutiny. For example, where a person removes the car keys of a friend who is over the legal alcohol limit, this could be technically viewed as a theft or trespass in tort, but is highly unlikely to ever be subject to a legal challenge. Similarly, the person who restrains a loved one from jumping off a building could be technically liable for false imprisonment, deprivation of liberty or assault, but is highly unlikely to be prosecuted for these actions.

Legal boundaries to regularise an interference with personal autonomy or liberty typically take two distinct forms. One approach is the creation of a power to intervene which acts as a liability protection for the intervenor after the fact. Another approach could be the establishment of a duty of care to compel an intervenor to act in certain circumstances. The existence of a power does not imply a duty to exercise that power, whereas the duty imposes a positive obligation to intervene if certain criteria are met. While the delineations of powers to intervene is important and necessary for all individuals in emergency situations (not just those with a label of disability)—the creation of positive duties to act is more problematic as it can penalise those who refuse to intervene even where this refusal is based on respect for the individual's will and preferences to undertake a particular course of action.

Although statutory powers to override a person's autonomy might be developed in order to respond to emergency situations, without a narrow scope and sufficient oversight, these powers are far more likely to be used to make more routine interventions—as evidenced by the framing of the general defence in the MCA. Therefore, in moving towards the codification of emergency interventions we should take care not to over-legalise the kinds of actions we perceive as understandable human responses to people in distress, while also not providing an overly-broad authority to those who wish to override an individual's personal autonomy. It is outside the scope of this paper to set out how the codification of the doctrine of necessity might take place. Nevertheless, the next section will turn briefly to two key elements which we would argue would advance any law reform process which wished to undertake any such law reform processes—ensuring deliberative reform involving persons with disabilities, and seeking alternative legal processes to facilitate access to support.

5.2. Deliberative Law Reform Involving High-Level Participation of People with Disabilities

Although processes in mental health law are ostensibly designed to safeguard the rights of those who are subject to involuntary treatment, it appears that this same cohort has been historically (and contemporaneously) excluded from the development of these law reform processes. The term “cohort” is meant here to refer to people subject to involuntary treatment and detention, but this would also reasonably include all persons with psychosocial disability whose rights to liberty and consent in (mental) healthcare, according to the terms of Australian mental health legislation, are currently held to a different standard compared to other citizens. This may be challenging if Perlin is correct in his view that “[t]here is little evidence that these groups are taken seriously either by lawyers or academics” ([60], p. 699; see also [61]), to which might be added policymakers. However, if it is the case that safeguarding users' civil rights serves as the most compelling function of mental health law—which many commentators and governments agree is the case (see for example [23,27])—it would seem logical that any such safeguards and rights protections ought to be developed in active participation with those for whom the safeguards are intended.

Such a strategy for “taking steps to immediately” abandon substituted decision-making (as the CRPD Committee, defines it) was advanced in Australia’s 2012 “shadow report” to the CRPD Committee [62]. A “shadow report” refers to the report required by the CRPD Committee to indicate how a particular country is or is not in compliance with the CRPD; it is often compiled by civil society representatives, particularly disability people’s organisations and submitted alongside government reporting. One of the major recommendations of the Australian shadow report is that “in consultation with people with disability through their representative, advocacy, and legal organisations, Australia conducts a comprehensive audit of laws, policies and administrative arrangements underpinning compulsory treatment” ([62], p. 15). This would be done “with a view to...introducing reforms to eliminate laws and practices that relate to compulsory treatment that inherently breaches human rights” ([62], p. 15). The collaborative processes promoted in Australia’s shadow report could be used to develop a range of short- and mid-term recommendations toward achieving a supported decision-making regime. This may include a greater number of personal advocacy services, as well as facilitators of support arrangements, such as those advanced by the South Australian Office of the Public Advocate [63].

Such deliberative processes would build upon the recommendations of the CRPD Committee, who—echoing article 4(3)—recommended in its General Comment on Article 12 (para. 50(c)) that governments:

(c)losely consult with and actively involve persons with disabilities, including children with disabilities, through their representative organizations, in the development and implementation of legislation, policies and other decision-making processes that give effect to article 12 [62].

Participation is an essential element of a human rights-based approach to disability/mental health law and policy, and is linked to obligations to respect, protect and fulfill the right to legal capacity. Such collaborative procedures are not without precedent. Domestic supported decision-making laws in Canada were developed with the active participation of those most affected by and vulnerable to the deprivation of legal capacity, including people with disabilities, their families and other supporters (see [64]), and the “Personal Ombuds” scheme in Sweden (which we shall describe below) reportedly had a “service user organization as (the) principal” in the initial program development of 2 of 10 launch sites [65]. This type of exchange can continue to provide material and expertise for creating legal models for supported decision-making. These procedures will also help to resolve some of the lingering issues and concerns about supported decision-making.

Hence, a key focus for governments should be on establishing collaborative procedures to develop a supported decision-making regime, and to develop some of the codifications for emergency intervention on an equal basis with others. Certainly, the issue of coercion—as with all others—is not uniformly agreed upon by commentators who write from the perspective of lived experience of mental health crises (see for example, [28] and *cf.* [66]). Public action toward implementation will require new partnerships and institutional mechanisms that are particularly responsive to the demands of the most disadvantaged in society. This is especially necessary when involving those who have experienced civil commitment first-hand. It may also be that individuals with disabilities and disabled people’s organisations will require resources to develop their potential to contribute to the development

of a supported decision-making regime, including through research, evaluation and monitoring (see generally [67]).

5.3. Introduce Support Measures

As a final point, this last Section will be used to propose a law reform agenda that identifies how the law could facilitate measures to help people access preferred types of support. McSherry has written that the CRPD “moves beyond a focus on negative rights in the sense of freedom from involuntary detention and treatment, to one that emphasises positive rights in requiring States Parties to provide the services and supports” for people with psychosocial disabilities ([33], p. 197). As such, reform measures can reasonably turn to ensuring support to assist people to exercise core rights, including living independently, exercising legal capacity, making healthcare decisions and so on. Flynn and Arstein-Kerslake refer to the “support model of legal capacity” in line with the CRPD, which would seek to guarantee access to measures to support the exercise of legal capacity [68].

One prominent example of support to exercise legal capacity for persons with psychosocial disability is the “Personligt ombud” (PO) scheme [65]. Salzman notes that Swedish law provides for the “judicial appointment of a legal mentor or PO to act as a decision-making assistant judicial appointment of to assist a person to make legal decisions” ([69], p. 308). In at least one version of the program, “an individual with severe psychosocial disability can appoint his or her own PO, with the PO accountable only to the individual who is receiving assistance” ([69], p. 309). The PO functions as a sort of legal mentor or personal ombudsman who is often referred to as an “assistant” or “advocate” [65]. The PO scheme is both social service and legal structure, and provides for a range of support relationships for people with disabilities and other disadvantaged people. These various formal supporters generally comprise trained social workers or lawyers who must be able to “argue effectively for the client’s rights in front of various authorities or in court”, as required [65].

The Office of the High Commissioner for Human Rights identified the PO scheme as an effective statutory mechanism for providing supported decision-making to persons with psychosocial disability, in line with the CRPD [70]. Elsewhere, Herr describes Sweden as “one of the most advanced countries in developing legal techniques to reinforce rather than disregard a person’s capacity for making choices” ([71], p. 432). As well as providing a good practice from a human rights perspective, the scheme is reported to provide fiscal gains. The Swedish National Board of Health and Welfare report savings up to 17 times the cost of the service itself ([65], pp. 23–24). The saving is explained by a reduction in the number of crises and by the POs facilitative role in co-ordinating between services and highlighting weaknesses in service provision.

The PO scheme and other supported decision-making measures can help address the human rights and efficacy concerns regarding involuntary outpatient treatment. Increasing evidence indicates a lack of success of coercion under community treatment orders (CTOs) and other forms of involuntary outpatient treatment which provides an additional impetus to develop law, policy and practice that replaces substituted decision-making with the support model of the CRPD. Reflecting on the mounting empirical enquiries which have failed to support the view that CTOs are effective (see for example [72,73]), Sonia Johnson has argued that “the case for urgent review of this legislation, both at government level and within the professions involved in CTO use, is now strong” [74]. Indeed, the

CRPD Committee has specifically called for States Parties to repeal legal provisions for involuntary outpatient treatment on human rights grounds, and argue that CTOs should be replaced by supported decision-making measures ([5], para. 34). In its recent compliance review of Australia, the CRPD Committee identified CTOs as a source for urgent law reform:

The Committee recommends that Australia should repeal all legislation that authorises medical interventions without free and informed consent of the persons with disabilities concerned, and legal provisions that authorize commitment of individuals to detention in mental health services, or the imposition of compulsory treatment either in institutions or in the community via Community Treatment Orders (CTOs) ([5], para. 34).

While the repeal or fundamental transformation of mental health legislation in its entirety would constitute a highly demanding reform process—as would the introduction of mental capacity assessments—the replacement of legal provisions for involuntary outpatient treatment seems to be far less challenging. The development of alternative support arrangements could occur with consideration of the wide range of practices being developed around the world, including the evidence on promising practices for providing support to exercise legal capacity (see [65,75]). Introducing such measures would constitute a substantial step towards the development of a supported decision-making regime in the mental health context.

6. Conclusions

The CRPD is giving new life to longstanding debates about mental health law and policy. For many, the shift in thinking on equality, legal capacity and disability may be “disorienting, uncomfortable, even frightening”, as Kristin Booth Glen has described ([46], p. 162). Booth herself was a key reformer in the most recent guardianship law reform in New York State, USA [46]. Certainly, the transformation of national mental health legislation to comply with the CRPD will pose major difficulties in both legal and political terms. Nevertheless, new pathways are emerging which invite reformers to address *external* determinants of disablement in line with the mandate of the CRPD to which a major culprit is seen to be “special” laws which establish different standards of rights for certain disability groups. The move toward using mental capacity assessments in overriding autonomy is meant as a step toward addressing this disablement. However, as we have argued throughout this paper, such a move falls shy of compliance with the CRPD and may undermine the very ends being sought; that is, achieving non-discrimination.

Australian jurisdictions are unlikely to repeal mental health law in the short (and possibly even mid) term. However, debates on whether involuntary mental health interventions should cease or fundamentally transform in the light of human rights obligations will be more likely resolved where clear strategies exist for replacing substituted decision-making regimes with measures to support the exercise of legal capacity on an equal basis with others (including in emergency crises). We have sketched a possible alternative, which raises concerns about the proposal of introducing mental capacity assessments while also seeking to identify alternative legal processes where emergency intervention may be required.

The use of non-discriminatory standards for overriding autonomy through the codification of the doctrine of necessity in legislation would no doubt raise a host of other questions requiring further research. A legitimate concern may be that broadening the scope of such standards could result in

“net-widening” by capturing other citizens who meet the criteria for emergency intervention, creating the potential for paternalistic over-reach by the law into citizens’ lives. While it is highly doubtful that proponents of the support model of the CRPD would welcome such a development, it would not raise a concern of disability rights *per se*. Instead, the focus would turn to basic—and intractable—political questions about the legitimate reach of the law into the autonomy of all citizens and not just the civil rights of a heretofore discriminated against minority—which seems to be precisely the shift the CRPD is meant to achieve.

Author Contributions

The main argument of this article was developed in discussions between both authors. Dr. Gooding was the principal author of Sections 1, 2, 3, 4, 5 (5.2–3) and 6. Dr. Flynn was the principal author of section 5.1.

Conflicts of Interest

The authors declare no conflict of interest.

Abbreviations

CRPD: United Nations Convention on the Rights of Persons with Disabilities;

CRPD Committee: United Nations Committee on the Rights of Persons with Disabilities;

UN: United Nations.

References

1. Anna Nilsson. “Objective and Reasonable? Scrutinising Compulsory Mental Health Interventions from a Non-Discrimination Perspective.” *Human Rights Law Review* 14 (2014): 459–85.
2. Michael Dudley, Derrick Silove, and Fran Gale. *Mental Health and Human Rights—Vision, Praxis, and Courage*. Oxford: Oxford University Press, 2012.
3. Bernadette McSherry, and Penelope Weller, eds. *Rethinking Rights-Based Mental Health Laws*. Oxford and Portland: Hart Publishing, 2010.
4. Peter Bartlett, Oliver Lewis, and Oliver Thorold. *Mental Disability and the European Convention on Human Rights*. Leiden: Martinus Nijhoff, 2007, vol. 10.
5. United Nations Committee on the Rights of Persons with Disabilities. “Concluding Observations of the Committee on the Rights of Persons with Disabilities (Australia) (Advance Unedited Version) CRPD/C/AUS/CO/1 10th sess.” 2–3 September 2013. Available online: http://tbinternet.ohchr.org/_layouts/treatybodyexternal/Download.aspx?symbolno=CRPD%2fC%2fAUS%2fCO%2f1andLang=en (accessed on 2 December 2013).
6. United Nations Committee on the Rights of Persons with Disabilities. “General Comment No. 1—Article 12: Equal Recognition before the Law, UN Doc. No. CRPD/C/GC/1, adopted at the 11th Session.” April 2014. Available online: <http://www.ohchr.org/EN/HRBodies/CRPD/Pages/GC.aspx> (accessed on 2 June 2015).

7. Office of the High Commission for Human Rights. “Dignity and Justice for Detainees: Information Note no 4.” 2009. Available online: http://www.ohchr.org/EN/UDHR/Documents/60UDHR/detention_infonote_4.pdf (accessed on 24 August 2012).
8. United Nations Human Rights Council. “Report of the Special Rapporteur on torture and other cruel, inhuman or degrading treatment or punishment, Juan E. Méndez.” 1 February 2013. Available online: <http://www.unhcr.org/refworld/docid/51136ae62.html> (accessed on 19 February 2015).
9. Sascha Callaghan, and Chris Ryan. “Is there a future for involuntary treatment in rights-based mental health law?” *Psychiatry, Psychology and Law* 21 (2014): 747–66.
10. John Dawson, and George Szmukler. “Fusion of mental health and incapacity legislation.” *The British Journal of Psychiatry* 188 (2006): 504–09.
11. Rowena Daw. “The case for a fusion law: Challenges and issues.” In *Coercive Care: Rights, Law and Policy*. London: Routledge, 2013, pp. 93–113.
12. Peter Bartlett. “The Necessity Must be Convincingly Shown to Exist: Standards for Compulsory Treatment for Mental Disorder under the Mental Health Act 1983.” *Medical Law Review* 19 (2011): 514–47.
13. George Szmukler, and Frank Holloway. “Mental health legislation is now a harmful anachronism.” *Psychiatric Bulletin* 22 (1998): 662–65.
14. People with Disabilities Australia, the Australian Centre for Disability Law, and the Australian Human Rights Centre. “Submission to the Australian Law Reform Commission (ALRC): Equality, Capacity and Disability in Commonwealth Laws, Discussion Paper.” May 2014. Available online: <http://www.alrc.gov.au/inquiries/disability/submissions> (accessed on 4 June 2015).
15. Eilionóir Flynn. “Mental (in)capacity or legal capacity? A human rights analysis of the proposed fusion of mental health and mental capacity in Northern Ireland.” *Northern Ireland Legal Quarterly* 64 (2013): 485–505.
16. Anna Arstein-Kerslake. “An empowering dependency: Exploring support for the exercise of legal capacity.” *Scandinavian Journal of Disability Research*, 2014. doi:10.1080/15017419.2014.941926.
17. Charlotte Emmett, Marie Poole, John Bond, and Julian C. Hughes. “Homeward bound or bound for a home? Assessing the capacity of dementia patients to make decisions about hospital discharge: Comparing practice with legal standards.” *International Journal of Law and Psychiatry* 36 (2013): 73–82.
18. Val Williams, Geraldine Boyle, Marcus Jepson, Paul Swift, Toby Williamson, and Pauline Heslop. “Making Best Interests Decisions: People and Processes.” Available online: http://www.mentalhealth.org.uk/content/assets/PDF/publications/best_interests_report_FINAL1.pdf?view=Standard (accessed on 2 August 2014).
19. Jillian Craigie, and Lisa Bortolotti. “Rationality, Diagnosis, and Patient Autonomy in Psychiatry.” In *Oxford Handbook of Psychiatric Ethics*. Edited by John Z. Sadler, Kevin W. M. Fulford and Cornelius Werendy van Staden. London: Oxford University Press, 2015, vol. 1.
20. Serene Teh, Andy J. Xiao, Edward Helmes, and Deirdre Drake. “Electroconvulsive Therapy Practice in Western Australia.” *Journal of ECT* 21 (2005): 145–50.
21. Worrawat Chanpattana. “A Questionnaire Survey of ECT Practice in Australia.” *Journal of ECT* 23 (2007): 89–92.

22. Mental Health Review Board of Victoria, and Psychosurgery Review Board of Victoria. "2012/2013 Annual Report." 2013. Available online: <http://www.mht.vic.gov.au/forms-and-publication/annual-reports/> (accessed on 4 June 2015).
23. Victorian Law Reform Commission. *Guardianship Consultation Paper*. Melbourne: Victorian Law Reform Commission, 2011.
24. Terry Carney, David Tait, Julia Perry, Alikki Vernon, and Fleur Beaupert. *Australian Mental Health Tribunals: Space for Fairness, Freedom, Protection and Treatment?* Sydney: Themis, 2011.
25. Brenda Hale. "Justice and Equality in Mental Health Law: The European Experience." *International Journal of Law and Psychiatry* 30 (2007): 18–28.
26. Elizabeth Farr. "A Personal Account of Schizophrenia." In *Schizophrenia: The Facts*. Edited by Ming Tsuang. Oxford: Oxford University Press, 1982, pp. 1–2.
27. George Szmukler, Rowena Daw, and John Dawson. "A Model Law Fusing Incapacity and Mental Health Legislation." *Journal of Mental Health Law* 20 (2010): 11–24.
28. Tina Minkowitz. "The United Nations Convention on the Rights of Persons with Disabilities and the Right to Be Free From Non-Consensual Psychiatric Interventions." *Syracuse Journal of International Law and Commerce* 34 (2007): 405–28.
29. Michael Perlin. "International Human Rights Law and Comparative Mental Disability Law: The Universal Factors." *Syracuse Journal of International Law and Commerce* 34 (2007): 69–77.
30. Stephen Rosenman. "Mental Health Law: An Idea Whose Time Has Passed." *Australian and New Zealand Journal of Psychiatry* 28 (1994): 560–65.
31. Stephen J. Morse. "Crazy Behavior, Morals, and Science: An Analysis of Mental Health Law." *Southern California Law Review* 51 (1997): 527–654.
32. Jill Peay, ed. *Seminal Issues in Mental Health Law*. Farnham: Ashgate, 2005.
33. Bernadette McSherry. "Mental Health Laws: Where to From Here?" *Monash University Law Review* 40 (2014): 175–97.
34. Michael Perlin, and Eva Szeli. "Mental Health Law and Human Rights: Evolution and Contemporary Challenges." In *Mental Health and Human Rights: Vision, Praxis, and Courage*. Edited by Michael Dudley, Derrick Silove and Fran Gale. Oxford: Oxford University Press, 2013, p. 80.
35. Mental Health Commission (Australia). "Glossary." 2015. Available online: www.mentalhealthcommission.gov.au/ (accessed on 25 February 2014).
36. People with Disabilities Australia. "Terminology Used by PWDA." 2015. Available online: <http://www.pwd.org.au/student-section/terminology-used-by-pwda.html> (accessed on 25 February 2014).
37. Sheila Wildeman. "Protecting Rights and Building Capacities: Challenges to Global Mental Health Policy in Light of the Convention on the Rights of Persons with Disabilities." *The Journal of Law, Medicine & Ethics* 41 (2013): 48–73.
38. United Nations High Commissioner for Human Rights. "United Nations Convention on the Rights of Persons with Disabilities: Reservations and Declarations (Australia)." 2008. Available online: https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=iv-15&chapter=4&lang=en#EndDec (accessed on 4 June 2015).
39. United Nations Committee on the Rights of Persons with Disabilities. "Statement on article 14 of the Convention on the Rights of Persons with Disabilities." September 2014. Available online:

<http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=15183&LangID=E#sthash.jlk58o0F.dpuf> (accessed on 12 January 2014).

40. United Nations General Assembly, OHCHR, Tenth session Agenda item 2. “Annual Report of the United Nations High Commissioner for Human Rights and Reports of the Office of the High Commissioner and the Secretary-General: Thematic Study by the Office of the United Nations High Commissioner for Human Rights on Enhancing Awareness and Understanding of the Convention on the Rights of Persons with Disabilities.” 26 January 2009. Available online: <http://www2.ohchr.org/english/bodies/hrcouncil/docs/10session/A.HRC.10.48.pdf> (accessed on 4 June 2015).
41. United Nations Committee on the Rights of Persons with Disabilities. “Concluding observations on the initial report of China, adopted by the Committee at its eighth session (17–28 September 2012).” 27 September 2012. Available online: http://www.ohchr.org/Documents/HRBodies/CRPD/8thSession/CRPD-C-CHN-CO-1_en.doc (accessed on 8 October 2012).
42. Peter Bartlett. “The United Nations Convention on the Rights of Persons with Disabilities and the future of mental health law.” *Psychiatry* 8 (2009): 496–98.
43. Douglas Mossman. “The imperfection of protection through detection and intervention. Lessons from three decades of research on the psychiatric assessment of violence risk.” *Journal of Legal Medicine* 30 (2009): 109–40.
44. Paul Appelbaum. “Violence and Mental Disorders: Data and Public Policy.” *American Journal of Psychiatry* 163 (2006): 1319–21.
45. Alec Buchanan. “Mental capacity, legal competence and consent to treatment.” *Journal of the Royal Society of Medicine* 97 (2004): 415–20.
46. Kristin B. Glen. “Changing Paradigms: Mental Capacity, Legal Capacity, Guardianship, and Beyond.” *Columbia Human Rights Law Review* 44 (2012): 93–169.
47. Genevra Richardson. “Mental Capacity in the Shadow of Suicide.” *International Journal of Law in Context* 9 (2013): 87–105.
48. Piers Gooding. “Navigating the Flashing Amber Lights of the Right to Legal Capacity in the United Nations Convention on the Rights of Persons with Disabilities: Responding to Major Concerns.” *Human Rights Law Review* 15 (2015): 45–78.
49. Amita Dhanda. “Legal Capacity in the Disability Rights Convention: Stranglehold of the Past or Lodestar for the Future?” *Syracuse Journal of International Law and Commerce* 34 (2007): 429–62.
50. Penelope Weller. “Lost in Translation: Human Rights and Mental Health Law.” In *Rethinking Rights-Based Mental Health Law*. Edited by Bernadette McSherry and Penelope Weller. Oxford and Portland: Hart Publishing, 2010, pp. 51–72.
51. Brian Burdekin. *Human Rights and Mental Illness: Report of the National Inquiry into the Human Rights of People with Mental Illness*. Canberra: Australian Government Publishing, 1993, vol. 1.
52. Phil Fennell. “Institutionalising the Community: The Codification of Clinical Authority and the Limits of Rights-Based Approaches.” In *Rethinking Rights-Based Mental Health Law*. Edited by Bernadette McSherry and Penelope Weller. Oxford and Portland: Hart Publishing, 2010, pp. 13–49.
53. Minister of the Department of Health, Social Services and Public Safety in Northern Ireland, and Northern Ireland Department of Justice. *Draft Mental Capacity Bill (NI) Consultation Document*.

- Belfast: Government of Northern Ireland, 2014. Available online: http://www.dhsspsni.gov.uk/mental_capacity_bill_consultation_paper.pdf (accessed on 4 June 2015).
54. Paul S. Appelbaum, and Thomas Grisso. "The MacArthur Treatment Competence Study: I. Mental illness and competence to consent to treatment." *Law and Human Behavior* 19 (1995): 105–26.
 55. Richard Keefe. "The neurobiology of disturbances of the self: Autozoetic agnosia in schizophrenia." In *Insight and Psychosis*. Edited by Xavier F. Amador and Anthony S. David. Oxford: Oxford University Press, 1998, pp. 5–22.
 56. Kate Diesfeld, and Stefan Sjöström. "Interpretive flexibility: Why doesn't insight incite controversy in mental health law?" *Behavioral Sciences & the Law* 25 (2007): 85–101.
 57. Mark Sullivan, and Betty Ferrell. "Ethical challenges in the management of chronic nonmalignant pain: Negotiating through the cloud of doubt." *The Journal of Pain* 6 (2005): 2–9.
 58. Kris Gledhill. "The Filling of the 'Bournewood gap': Coercive care and the statutory mechanisms in England and Wales." In *Coercive Care: Rights, Law and Policy*. Edited by Bernadette McSherry and Ian Freckleton. New York: Routledge 2013, pp. 114–34.
 59. Michael Bach, and Lara Kerzner. "A New Paradigm for Protecting Autonomy and the Right to Legal Capacity. Report to the Law Commission of Ontario 2010 14–15." Available online: <http://www.lco-cdo.org/en/disabilities-call-for-papers-bach-kerzner> (accessed on 12 January 2015).
 60. Michael L. Perlin. "'You Have Discussed Lepers and Crooks': Sanism in Clinical Teaching." *Clinical Law Review* 9 (2003): 683–730.
 61. Graeme Browne, and Martin Hemsley. "Consumer Participation in Mental Health in Australia: What Progress is Being Made?" *Australasian Psychiatry* 16 (2008): 446–49.
 62. Disability Representative, Advocacy, Legal and Human Rights Organisations Australia. "Disability Rights Now: Civil Society Report to the United Nations Committee on the Rights of Persons with Disability." August 2012. Available online: <http://www.disabilityrightsnow.org.au/node/15> (accessed on 12 December 2013).
 63. Margaret Wallace. "Evaluation of the Supported Decision Making Project Office of the Public Advocate." Available online: http://www.opa.sa.gov.au/documents/11_Supported%20Decision%20Making/8-Final%20Supported%20Decision%20Making%20Evaluation.pdf (accessed on 10 July 2013).
 64. Robert Gordon. "The Emergence of Assisted (Supported) Decision-Making in the Canadian Law of Adult Guardianship and Substitute Decision-Making." *International Journal of Law and Psychiatry* 23 (2000): 61–77.
 65. Swedish National Board of Health and Welfare. "A New Profession is Born—Personligt ombud, PO." September 2008. Available online: <http://www.personligtombud.se/publikationer/pdf/A%20New%20Profession%20is%20Born.pdf> (accessed on 17 December 2014).
 66. Nev Jones, and Mona Shattell. "Beyond Easy Answers: Facing the Entanglements of Violence and Psychosis." *Issues in Mental Health Nursing* 35 (2014): 809–11.
 67. Oliver Lewis, and Penelope Munro. "Civil Society Involvement in Mental Health Law and Policy Reform." In *Mental Health and Human Rights*. Edited by Michael Dudley, Derrick Silove and Fran Gale. Oxford: Oxford University Press, 2012.
 68. Eilíonóir Flynn, and Anna Arstein-Kerslake. "Legislating personhood: Realising the right to support in exercising legal capacity." *International Journal of Law in Context* 10 (2014): 81–104.

69. Leslie Salzman. “Guardianship for Persons with Mental Illness—A Legal and Appropriate Alternative?” *St. Louis University Journal of Health Law & Policy* 4 (2011): 279–330.
70. United Nations Office of the High Commission of Human Rights (OHCHR). *UN Handbook for Parliamentarians on the Convention on the Rights of Persons with Disabilities*. Geneva: OHCHR, 2007, chap. 6. Available online: <http://www.un.org/disabilities/default.asp?id=242> (accessed on 2 July 2010).
71. Stanley Herr. “Self-determination, Autonomy, and Alternatives to Guardianship.” In *The Human Rights of Persons with Intellectual Disabilities*. Edited by Stanley S. Herr, Lawrence O. Gostin and Harold Hong-Ju Koh. London: OUP, 2003, pp. 429–50.
72. Tom Burns, Jorun Rugkåsa, Andrew Molodynski, John Dawson, Ksenija Yeeles, Maria Vazquez-Montes, Merryn Voysey, Julia Sinclair, and Stefan Priebe. “Community treatment orders for patients with psychosis (OCTET): A randomised controlled trial.” *The Lancet* 381 (2013): 1627–33.
73. Steve R. Kisely, Leslie A. Campbell, and Neil J. Preston. “Compulsory community and involuntary outpatient treatment for people with severe mental disorders.” *Cochrane Database of Systematic Reviews* 2 (2011): CD004408.
74. Sonia Johnson. “Can we reverse the rising tide of compulsory admissions?” *The Lancet* 381 (2013): 1603–04.
75. Inclusion Europe. Available online: <http://www.right-to-decide.eu/> (accessed on 12 May 2015).

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